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REGIONAL TRANSPORTATION AUTHORITY

STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

FINAL DRAFT STRATEGIC PLAN

submitted by

Transportation Consulting Division
Booz · Allen & Hamilton Inc.

in association with
McDonough Associates, Inc.
and
Mundle & Associates, Inc.

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1. INTRODUCTION

I. INTRODUCTION

In 1983, the Regional Transportation Authority Act was amended to establish a revised organization structure and responsibilities for providing public transportation services in the six-county greater Chicago region. Since that time, the reorganization has been completed and each of the three Service Boards, the Chicago Transit Authority (CTA), Metra (Commuter Rail Board), and Pace (Suburban Bus Board), have continued or initiated independent operation under the fiscal guidance of the RTA. The RTA Board recognized that the new organization was on solid financial footing in the short run. But a longer run view of finances, markets, services and operations was needed to provide a view of future needs, changes and investments. Thus the Strategic Plan and Long-Range Capital Investment Plan project was initiated to provide guidance and perspective for the RTA and its Service Boards through the next three decades.

As an introduction to the Strategic Plan, it is useful to provide an overview and perspective on the size and scope of public transportation in the six-county Northeastern Illinois region of the RTA. A summary of the new roles and responsibilities of the RTA, a review of the need for the Strategic Plan, and a brief discussion of the participants and process for developing the Strategic Plan are included in this introductory chapter. A brief summary of the contents of subsequent chapters is then presented.

1.1 SCOPE AND SCALE OF TRANSIT IN CHICAGO

The Northeastern Illinois Regional Transportation Authority and the associated Service Boards represent a major investment by any measure — whether public or private. With an asset base of almost $13.6 billion, the RTA is the second largest business entity in the State of Illinois — ranking behind AMOCO, according to the Fortune 500 Industrials. In fact, the RTA would rank 21st among the nation's industrial firms on the basis of assets. A ranking by total revenue (including public funds) also places the RTA as a member of the "500" — 35th in Illinois, 319th in the United States.

The RTA serves six counties with a combined population of over 7.1 million people — greater than the population of 42 of the 50 states. The daily ridership of all RTA services is greater than the population of 19 states. This daily ridership represents almost 10 percent of the entire transit ridership in the United States in 1985. The RTA, therefore, is both significant in its service area and in net ridership results.

The RTA and its Service Boards control and operate over 5,000 passenger vehicles providing almost 175 million miles each year. The commuter and rapid rail systems represent over 1,400 track miles with 370 stations — a major rail network by any definition. The annual systemwide vehicle miles equate to roughly 7,000 trips around the earth.

These comparisons illustrate the size and breadth of the services provided by the RTA and Service Boards, and underscore the need to take this strategic outlook of the future horizon for public transit in the Chicago region. These rather simple illustrations also highlight the complexity and difficulty of this task. The RTA is responsible for a huge historic and current public investment (asset base) and must know whether it has the means (total revenue) to maintain and renew it — now and in the future. This strategic plan identifies those opportunities where future resources may best be applied and also where the RTA faces real challenges in the form of insufficient resources.

1.2 CONTEXT OF STRATEGIC PLAN

Public transportation in Northeastern Illinois has continuously developed and transitioned — from a once private company provision of service through predominantly public operators. Historical changes have included major investments in replacement facilities and new lines, as well as significant abandonments in response to changing market conditions and revised ownership and institutional relationships. The Regional Transportation Authority, a relatively young entity, has been reorganized and refinanced in response to the fiscal problems of the early 1980s. Given the new responsibilities of the RTA and its Service Boards, the changed financial picture, and an enhanced perception of the issues facing the RTA (both long term and short term); this strategic plan serves as a focal point for policy and investment to meet the challenges of the next several decades.

1.2.1 RTA — New Roles and Responsibilities

Transit in Northeastern Illinois has a heritage of new service and institutions developed to balance the economics of transit service provision, changing market patterns, and revenue combinations from farebox and public funding. The Chicago Transit Authority developed from a conglomeration of private bus and rail operators. Suburban commuter railroad service is now publicly supported with part of the system publicly owned and operated and part operated by privately owned rail carriers through contract to Metra. Suburban bus service, both within suburban communities and connecting to the regional services, is also publicly supported and operated through both public and private service providers under the auspices of Pace. The RTA was first organized in 1974 to coordinate and financially support the suburban bus operators and commuter railroads, and provide a local funding source for both the suburban services and the Chicago Transit Authority.

Following the financial difficulties of 1981, the RTA was formally reorganized in 1983 under the amended "Regional Transportation Authority Act."

This act had three significant features: it revised the roles and responsibilities of regional agencies, it created a formula for allocation of sales tax receipts, and it established a requirement that at least 50 percent of expenses be covered by fares and charges. The RTA now acts as the central financial and planning oversight agency for the three Service Boards — CTA, Metra, and Pace. These Service Boards have the direct responsibility to ". . . determine the level, nature and kind of public transportation . . .". The RTA focuses on the financial aspects of the Service Board budgets and five-year plans to ensure " . . . adequate public transportation throughout the metropolitan region.", and to meet the legislative requirement" . . . that the level of fares and charges . . . equal at least 50 percent of the aggregate costs . . .". In addition, the RTA is responsibile for the evaluation of Service Board programs in terms of goals, costs and relative priorities, and the coordination of these transportation programs.

The role of the RTA has therefore been changed under the 1983 amendment from both an operating and funding agency to a financial oversight and regional policymaking board. Transit services previously operated by the RTA have been transferred to the Commuter Rail and Suburban Bus Service Boards. The RTA has overall responsibility for Service Board budgets as part of its mandate to meet the 50 percent recovery ratio requirement. The taxing authority of the RTA is particularly important to the financial well being of the region's transit operations. The allocation of operating funds has changed considerably, with 85 percent of the sales tax proceeds routed directly to the Service Boards according to a formula based on the locational source of the funds and allocation percentages established in the legislation. RTA has discretionary allocation responsibility for the remaining 15 percent plus the state public transportation fund source pegged at 25 percent of the sales tax receipts. Currently these discretionary funds and other federal funds are allocated to each Service Board based on near-term financial needs. RTA also has the role of coordinating capital planning through the allocation of capital funding.

CTA, Metra and Pace have authority for all operating decisions regarding the level and type of transit services provided. The Service Boards also have the responsibility to set the fare structure and service standards for operation of their services. Service Boards have accountability requirements; they report performance in relation to budget and to recovery ratio targets defined by the RTA.

1.2.2 Need for the Strategic Plan

The RTA, working with the Service Boards, has developed a five-year plan as required by the Act that describes the provision of transit services, facilities and funding for the six-county Metropolitan Chicago area with a focus on financial health. The Strategic Plan is a look at the current five-year plan, but goes beyond to focus on new goals and plans for the RTA that will establish the future for regional public transportation service for the Year 2000 and beyond. These goals and plans recognize the significant external factors influencing public transportation and the impacts of policies on meeting the challenges of

the future. The RTA is currently on a reasonably firm fiscal and organizational footing, but uncertainties in the external environment and the continued pressures of cost escalation mandate a look beyond the near future to determine what actions are needed to maximize the potential for a continuing and enduring, quality public transportation service to the region. Not all of the problems of public transportation in Northeastern Illinois were permanently solved by the RTA reorganization and revised financing included in the amended Regional Transportation Act of 1983. The Strategic Plan is therefore an appropriate activity for defining the framework — financial, policy, service and management — that will describe the strategies needed to provide stability and flexibility for the future.

1.3 THE PLAN

The Strategic Plan has been developed using state-of-the-art analytical tools with collective integration and input from many sources. The policy oriented nature of the strategic planning process and the need to analyze alternative futures, whether defined by external factors or internal plans and policies, required that considerable analysis capability be developed. Tools for estimating ridership, financial impacts and asset replacement options were developed to understand the current situation, extrapolate the consequences of current and alternative trends and policies and estimate the impacts of change to these trends and policies.

Even more important than the analysis, however, was the interpretation, review, perspective and judgement of numerous parties — within the RTA and Service Boards, as well as external advisory and technical panels. Participation and thoughtful comment from both an analytical and interpretive perspective were provided by a number of regional planning agencies and local governments.

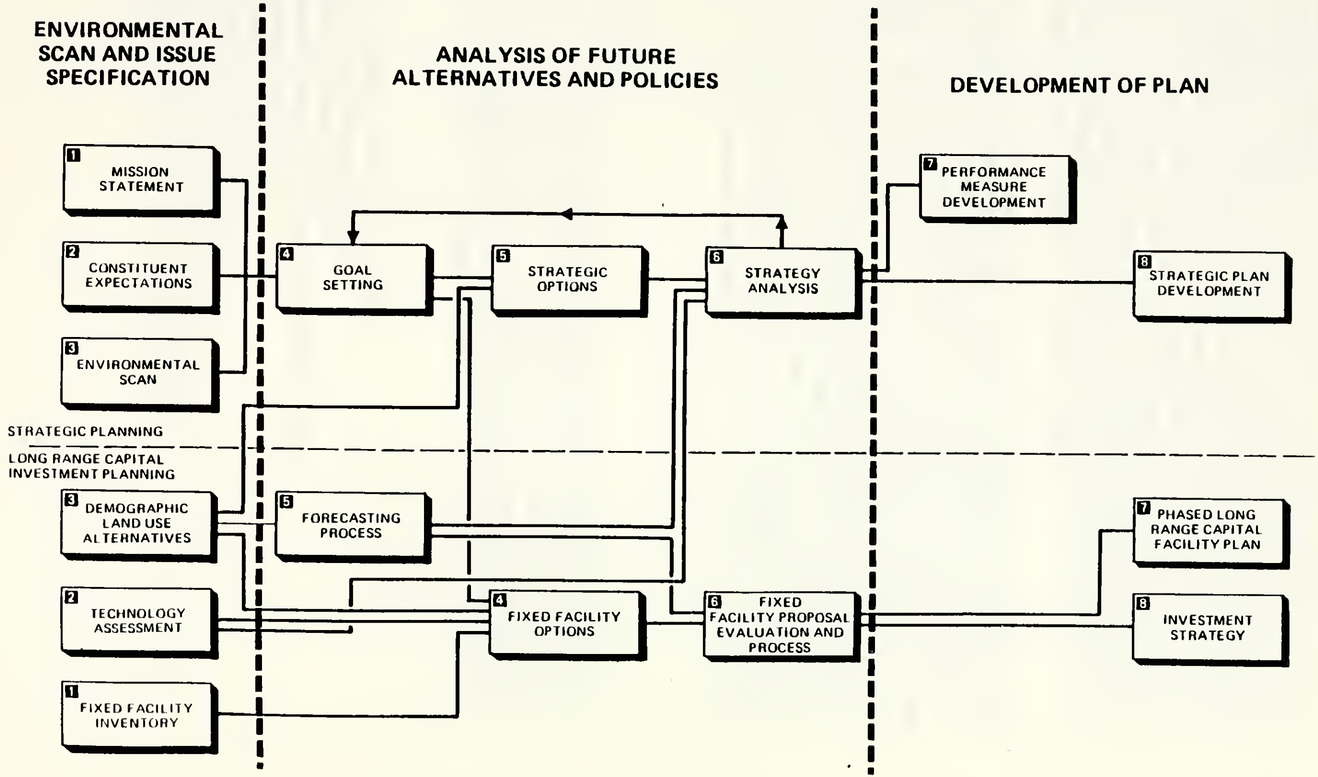
1.3.1 Process

The project consisted of sixteen overall tasks summarized into three phases: environmental scan and issue specification, analysis of alternative futures and policies, and development of the Strategic Plan and Long Range Capital Plan (Exhibit 1-1). Each of these major phases benefitted from extensive discussions with regional policy and decision-makers.

The first phase, environmental scan and issue specification, consisted of developing a basis in data and understanding of the current environment within which the RTA resides, and the strengths and weaknesses of its organization, financial base, and traveler markets. These perspectives were gained from data collection, analysis and extensive discussions with key members of the regional community — political, academic, management and governmental. An inventory of the system's assets was performed; estimates were prepared of possible demographic and socioeconomic futures; and evaluations were made of the threats and opportunities to the RTA as perceived by knowledgeable personnel and projected from financial, market and demographic data.

EXHIBIT 1-I
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Work Task Structure and Relationships



The second phase consisted of the analysis of alternative futures and the definition of policiès and plans to meet those futures. A scenario-based approach was a key to this phase. Various scenarios were developed describing short term and long term external circumstances intended to bracket the range of conditions that will or could become the base for policy and plans. Ideally, plans and policies developed in this process are sufficiently robust and broad to serve not only the most probable scenarios, but also the likely variations of the future. As described in later chapters, a strategy was selected to focus planning and policy formulation, but contingency alternatives were also posed to meet possible positive and negative future factors. As in the first phase, significant interaction between the strategic planning team and knowledgeable personnel within and outside the RTA was key to achieving understanding and consensus to the extent possible.

The final phase was the development of the recommended strategic plans, policies and investment programs that would be a guide to future RTA decision-making. Critical to this stage was the specification of plans and policies that are sufficiently broad to provide flexibility to the RTA and Service Boards — given fluctuating future circumstances, and yet sufficiently succinct to give tangible guidance for the future. It is recognized that interpretation and modification of these plans is necessary and desirable as they are converted from strategies to tactics, and as the future unfolds. Clearly, new information, changed external circumstances and revised public attitudes will need to be continually monitored and evaluated within the context of the strategy, with plans, programs and processes modified on a periodic basis. The RTA will need to monitor the critical external circumstances that impact plans and priorities: demographic patterns, external funding levels, ridership patterns and overall performance of the Service Boards.

1.3.2 Interim Products

A series of interim products were developed during the project reporting on draft findings, selected issues and milestone documents for consideration by the RTA Strategic Planning Committee. The salient parts of these documents have been included in this Strategic Plan. Additional details regarding methodology, assumptions and interim results are reported in those reports, though some exhibits and data have been updated in subsequent activities. The interim products are listed below:

- Strategic Planning Methodology Report
- Constituent Expectations Report
- Analytical Methodology Report
- Fixed Asset Inventory and Bedrock Investment Plan
- Environmental Scan Report
- First Round Strategic Options
- Second Round Strategic Options
- Financial Forecast Model Users Manual
- Bedrock Investment Program Model Users Manual
- Draft Strategic Plan and Capital Investment Plan

1.3.3 Analytical Techniques

Various analytical techniques used in the development of the Strategic Plan included several models of system cost and performance linked together in an overall analysis framework (Exhibit 1-2). Principal analysis tools included:

- Operating Cost Models - Equations describing the pooling of operations, maintenance and administrative costs into selected cost centers, with these costs related to key system level of service output measures such as vehicle hours, vehicle miles, car miles, peak vehicles, etc.

- Sales Tax Models - Simplified relationships between population, employment, gross sales levels, consumption rates and Chicago region economic activity forecasts available from Data Resources Inc.

- Capital Cost Models - Descriptions of the existing and under-construction or committed public transportation system including estimates of age, condition, replacement costs and rehabilitation policies (using data supplied by the three Service Boards) with estimates produced of capital asset replacement/rehabilitation schedules and financial impacts.

- Sketch Planning Models - Estimating techniques for home-to-work travel (developed by the University of Illinois at Champaign-Urbana and the Chicago Area Transportation Study) based on future population and employment profiles (provided by Northeast Illinois Planning Commission) with outputs consisting of travel patterns in future years by both transit and highway modes.

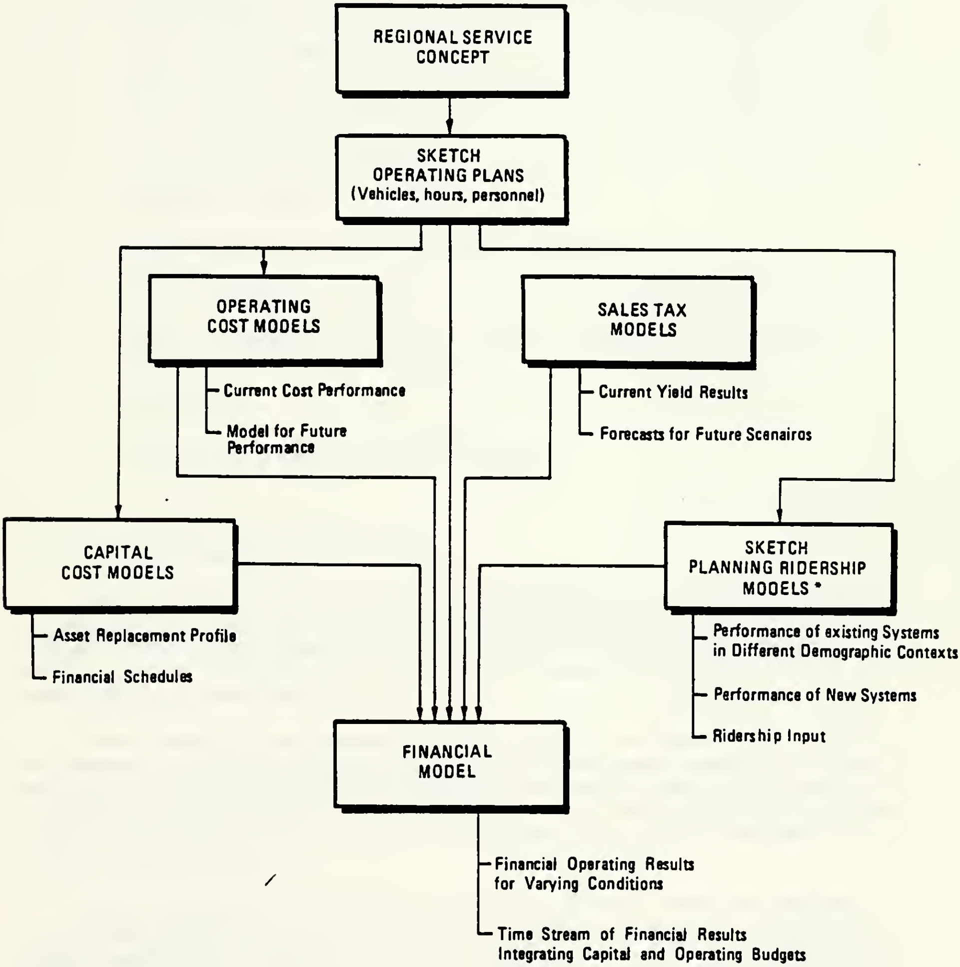
- Financial Model - Forecast model that incorporates the sales tax and other external funding estimates with ridership, revenue and cost estimates for each Service Board to produce annual profiles which, when coupled with capital funding levels and needs, produces a time stream of operating and capital results based on a variety of policy and external environment assumptions.

1.3.4 Participants

Over a hundred people have had a role in the development of the Plan, ranging from individual comment and advise, to collective input, technical analysis and interpretation of information. The most significant and continuing participants

EXHIBIT 1-2
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Strategic Planning Analysis Models



* Developed by the University of Illinois at Urbana/Champaign and CATS, and implemented by the Chicago Area Transportation Study using forecasts supplied by the Northeastern Illinois Planning Commission.

have, of course, been the RTA Strategic Planning Committee of the Board, including the chairman of each of the three Service Boards and the RTA staff. Other major contributors include:

- Service Board staffs, board members and citizens advisory committees
- Chicago Area Transportation Study
- Northeast Illinois Planning Commission
- External Advisory Committee
- Technical Advisory Committee
- Chicago Association of Commerce and Industry
- City of Chicago
- County commissioners and staff (Cook, Lake, DuPage, Kane, McHenry, Will) in the RTA region
- Illinois DOT
- Urban Mass Transportation Administration

1.3.5 Strategic Plan Document Structure

The Strategic Plan begins with a brief description of the process followed, the analysis tools used, interim products produced, and the participants. The context of the strategic planning project is explained, including a description of the current state of the RTA, a brief history of current circumstances, and the imperative for strategic planning.

Trends leading to the existing operating, capital and demographic structure are explored in Chapter 2: Environmental Scan. This chapter provides a focused overview of the demographic and economic changes in the region that are important to transit service; the facilities, services and recent performance of the three RTA Service Boards and the organizational and financial context within which service is provided.

With a perspective of the present and recent past trends, an analysis of threats and opportunities facing the RTA is presented in Chapter 3: Future of Public Transportation Services. The more significant external factors influencing the provision of transit service are presented along with descriptions of alternative futures. Demographic and economic changes and external financing circumstances are explored resulting in the definition of optimistic and pessimistic future scenarios. An analysis of the financial and ridership impacts under these various

futures, or scenarios, is then presented to define the threats and opportunities that these external futures pose for the RTA. A summary of the challenges facing the RTA is then presented as a prelude to the formulation of strategic goals, policies and plans.

Recognizing that strategic planning is not an attempt to predict the future, but a tool for dealing with uncertain futures, and that both optimistic and pessimistic external events can occur to alter the goals, objectives and plans of the RTA, a set of Long-Range Strategies and Investment Plans are presented in Chapter 4 to pose alternative courses of action for the RTA. Operating strategies in response to market characteristics and potential shifts are described. Investment strategies that support these market exigencies and operating strategies are defined in three parts: Cornerstone Program, New Initiatives Program, and New Technology Program. Each investment program is described including suggested program elements; and funding priorities for the three programs are suggested.

Since it is the role of the Service Boards to select types of services offered, determine fare policy and define management action, this plan is focused more on policy actions, leaving implementation of tactical timing and planning to the Service Boards with guidance by the RTA. The RTA's financial and regional coordination role is crucial in overall resource allocation and determination of the economic efficiency of Service Board action from a regional perspective. These long range strategies are therefore defined in broad terms, setting the framework for resource allocations that are balanced from the viewpoint of financing, regional needs, and individual Service Board prerogatives.

Contingency Plans are described that modify the priorities and focus of long range strategies and investment plans in the event that existing demographic patterns, associated market shifts, and/or external funding sources should deviate significantly from future expectations.

Finally, the Goals, Policies and Institutional Requirements are described in Chapter 5 that provide the mechanism for achieving the Strategic Plan. These requirements provide the tools for maintaining organizational priority and attention toward meeting the imperatives of the Strategic Plan. Implicit in these policy statements is the direction selected in meeting the challenges of the RTA — a direction incorporating:

- Aggressive actions to expand and protect the market share of public transit;
- Investment decisions that maximize use of the scarce resources available to the RTA;
- Transit service that responds in a flexible manner to the challenges of changing land use patterns and travel needs; and
- The need to balance the sources of funding with the uses of funding.

The aim of the Strategic Plan is to achieve a public transportation system that is responsive to the region's needs, while being cognizant of the balance between user benefits and societal benefits and the implications of cost sharing between the rider and the region. The plan is based on the vision of a strong, enduring regional transit system — a system that will be a major factor and guide the future of the Chicago region, while providing its citizens with a quality, cost-effective service. This vision will require cooperation, courage and commitment by the entire RTA family and the community at large. Changes will be required, particularly in funding and in services, to make the RTA an enduring and positive force for continuing economic development in the region. With this plan as a guideline; and with the marketing, operating and investment strategies described herein as focal points for decision-making, this vision of the RTA as a strong and enduring regional transit system can be realized.

2. ENVIRONMENTAL SCAN

2. ENVIRONMENTAL SCAN

A current view of transit service in the Chicago metropolitan area is provided from three key perspectives:

- RTA organization and financial structure;
- Public transportation facilities and services; and
- Recent trends in population and employment and their impacts on transit markets.

Analysis of the transit system and the environment in which it operates provides an understanding of the complex interactions — social, financial, and economic — that comprise the existing RTA environment. This baseline description is fundamental to understanding the future of the RTA and establishing a strategy to meet the challenges it presents.

2.1 ORGANIZATION AND FINANCIAL STRUCTURE

Institutional arrangements, roles and responsibilities for the provision and financing of public transportation service changed significantly in 1983. These changes and the underlying financial structure of the RTA provide a starting point for understanding current opportunities and challenges.

2.1.1 RTA Organization

In 1983 the Illinois General Assembly made fundamental changes in RTA organization and funding. RTA was given financial oversight and regional coordination responsibilities for public transportation, while operational and management responsibility was vested in the Service Boards. As a municipal corporation, the RTA has the powers of taxation and eminent domain. Metra and Pace were formed as separate divisions of the RTA — each with their own boards — to form organizational elements parallel in function to the CTA.

The RTA levies a sales tax and is responsible for allocating the discretionary portion of those receipts (15 percent by legislation) and the State Public Transportation Fund (25 percent of sales tax receipts) as operating funds to the Service Boards subject to the legislative requirements that 50 percent of operating expenses be covered from system generated revenues (primarily revenues from transit fares). In addition, the RTA allocates capital funding to the Service Boards.

Each Service Board retains the policy-making role of setting fares and allocating resources (vehicles and personnel) through service scheduling and operational planning and management of their respective service areas and lines. Each Service Board operates its own service, although Metra and Pace have significant portions of their operations performed through contracts with railroads and municipal bus operations, respectively. CTA also contracts with private firms to provide mobility-limited paratransit services.

2.1.2 Sources and Uses of Operating Funds

The RTA and its Service Boards received $939 million in operating revenue in 1985 (Exhibit 2-1). This operating support was derived from almost equal shares of internal and external sources. External sources of revenue contributed $486 million, or 52 percent of the total, while internal sources, primarily farebox revenue collected by the Service Boards, constituted the remaining 48 percent, or $453 million.

The RTA's largest single source of revenue is the regional sales tax; proceeds from this tax totaled $342 million in 1985 — more than one-third of revenue derived from all sources. Other external revenue sources in 1985 include the State Public Transportation Fund (a 25 percent match of sales tax proceeds) — $85 million; Federal (UMTA) Section 9 formula grants — $58 million; and other external sources — $1 million.

Of the RTA's internally derived revenue, $445 million of the $453 million total is collected from the farebox; the remaining $8 million includes RTA interest income. The CTA alone contributed almost one-third of total revenue from all sources — $297 million, or 32 percent of the $939 million total; its share of internally generated revenue constituted 66 percent. Additionally, Metra contributed $130 million, or 29 percent of internal revenue; and Pace contributed $18 million, or 4 percent of revenue from internal sources.

Revenue is used primarily to fund Service Board operations (Exhibit 2-2). In 1985, the RTA expensed $936 million, with $891 million, or 95 percent, allocated directly to the Service Boards. The CTA received the largest share of regional transit funds — $587 million, or 66 percent of all operating funds. Metra and Pace received $237 million and $60 million, respectively. The RTA received $7 million to finance administrative expenses and interest payments. In addition to funding operations, the RTA allocated $45 million to capital grants and other expenses (capital grants do not include approved positive budget variances from the Service Boards).

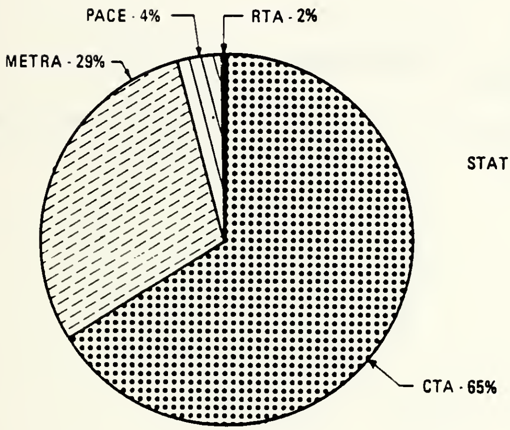
As highlighted in Exhibit 2-1, the regional sales tax is the RTA's largest source of revenue, contributing $342 million in transit funds in 1985. The regional sales tax rate is currently one percent of retail sales in Chicago and suburban Cook County and 0.25 percent for the Collar Counties. Chicago and Suburban Cook County provide the greatest share of sales tax revenue — $124 million, or 36 percent, and $183 million, or 53 percent, of total tax revenue, respectively (Exhibit 2-3). Though Chicago's share of tax revenue is more than one-third of the total, tax revenue has grown more rapidly outside Chicago. Between 1980

EXHIBIT 2-1

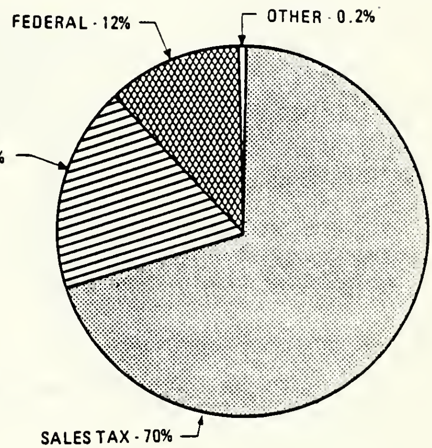
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Operating Revenue Sources - 1985
(In Millions)

INTERNAL $453



EXTERNAL $486



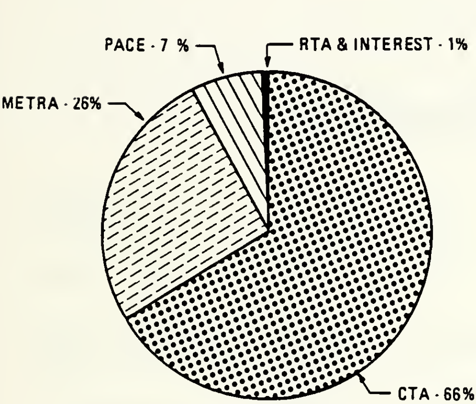
TOTAL IN MILLIONS - $939

INTERNAL - 48%		EXTERNAL - 52%	
CTA	$297	SALES TAX	$342
METRA	$130	FEDERAL	$ 58
PACE	$ 18	STATE	$ 85
RTA	$ 8	OTHER	$ 1
TOTAL	$453	TOTAL	$486

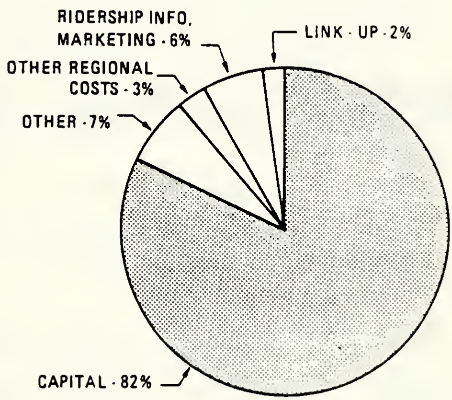
EXHIBIT 2-2
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Uses of Operating Revenue - 1985
(In Millions)

SERVICE BOARD OPERATIONS - $891



CAPITAL & OTHER - $45



TOTAL IN MILLIONS - $936

OPERATIONS 95%	
CTA	$587
METRA	$237
PACE	$ 60
RTA & INTEREST	$ 7
TOTAL	$891

OTHER 5%	
CAPITAL	$37
OTHER	$ 8
TOTAL	$45

EXHIBIT 2-3
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Jurisdictional Sales Tax Distribution and Trends
($ Millions)

	1980		1985		Percent Change
	Yield	% of Total	Yield	% of Total	1980 - 1985
Chicago	$ 93.6	40.8%	$123.9	36.2%	32.4%
Other Cook	$114.3	49.8%	$182.8	53.4%	59.9%
Collar Counties	$ 21.6	9.4%	$ 35.7	10.4%	65.3%
Total Yield	$229.5	100.0%	$342.4	100.0%	49.2%

and 1985, annual tax receipts rose 32.4 percent in Chicago, while tax revenue increased 59.9 percent in suburban Cook County, and 65.3 percent in the Collar Counties.

Two factors are contributing to the increasing suburban sales tax contribution: suburbanization trends and greater suburban per capita consumption. From 1980 to 1985, Chicago's combined population and employment level decreased 1.2 percent. Conversely, in suburban Cook and Collar Counties, population and employment increased by 1.6 percent and 7.5 percent, respectively.

In all jurisdictions, tax revenue increased faster than inflation, indicating an increase over the amount of tax revenue growth expected from rising prices of consumer goods. However, this "real" growth in sales tax revenue, measured in 1985 dollars, was greater in suburban Cook and the Collar Counties (Exhibit 2-4) indicating a faster growing rate of per capita consumption (or spending). In these areas, real growth in tax revenue rose 3.8 percent annually, whereas Chicago experienced 0.5 percent average annual real growth.

2.1.3 Sources and Uses of Capital Funds

In addition to providing funds for regional transit operations, funds are also needed to expand, modernize, replace or rehabilitate the physical assets of the region's transit system.

Capital funding from all sources over the 1980 to 1985 period averaged $233.4 million, though it has varied by more than $100 million from its high and low levels (Exhibit 2-5). The Federal program (UMTA) has been the largest contributor of funds, averaging 78 percent of RTA's total capital funds received. UMTA funding has been supplied through the Section 3 discretionary capital program, Section 5, and Section 9 formula grants. Since 1983, however, Federal capital support has declined from $230 million to $180 million — a trend which would continue under the current Administration's policy. Capital support from the state has increased moderately overall, though it has decreased in the last three years of the period as some state support has been diverted to Interstate Transfer projects. Contributions from the RTA and other sources comprise the smallest, but growing, portion of capital funds, averaging approximately 4 percent of total capital support. In 1984, RTA's capital contribution was $15 million. The 1985 contribution was $37 million excluding approved positive budget variances from the Service Boards; including $33 million in positive budget variances increases the RTA contribution to $70 million. The 1986 plan includes a contribution of $70 million consisting of $32 million in local matching funds and $38 million in funding from Service Board positive budget variances.

Another significant contribution to the RTA capital funding is the Interstate Transfer Program. These funds, "traded in" as a replacement for the Crosstown Expressway link in the Interstate Highway System, were split into two funding pools. Suburban jurisdictions used approximately 90 percent of their funds for highway improvements and the remainder for suburban transit projects — predominantly rail station improvements and fringe parking lots. The City

EXHIBIT 2-4
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Jurisdictional Sales Tax Trends

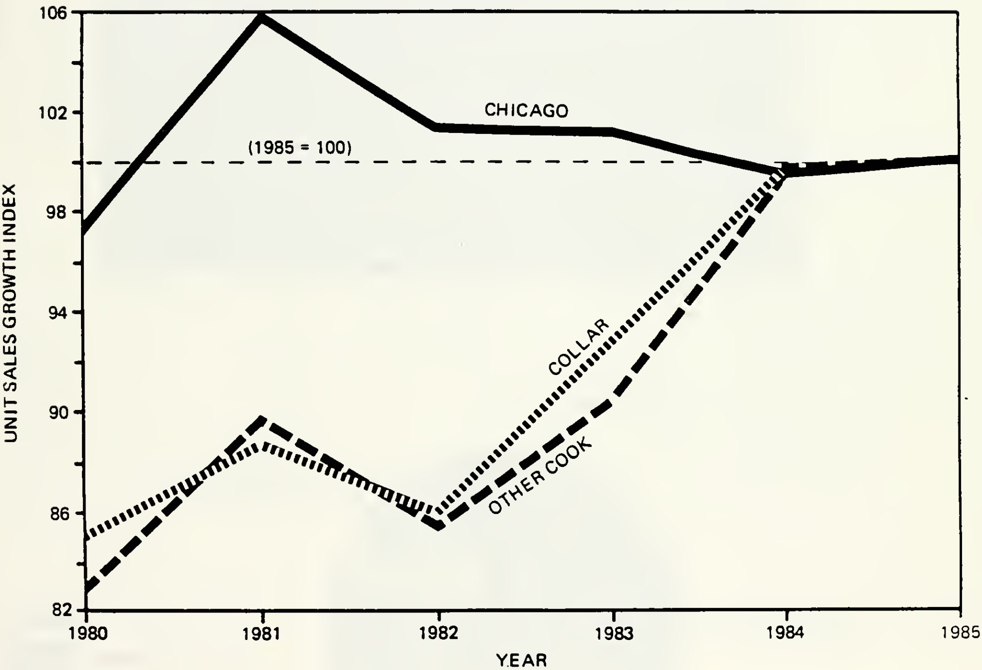
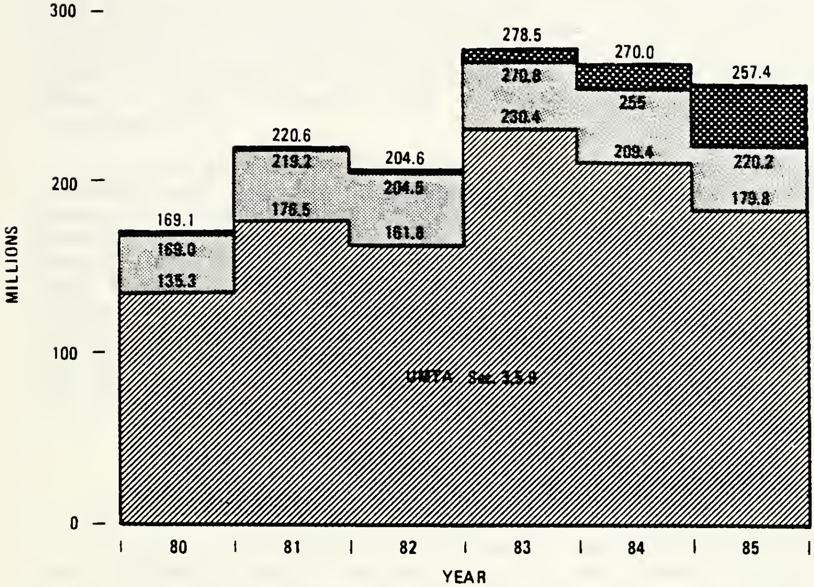
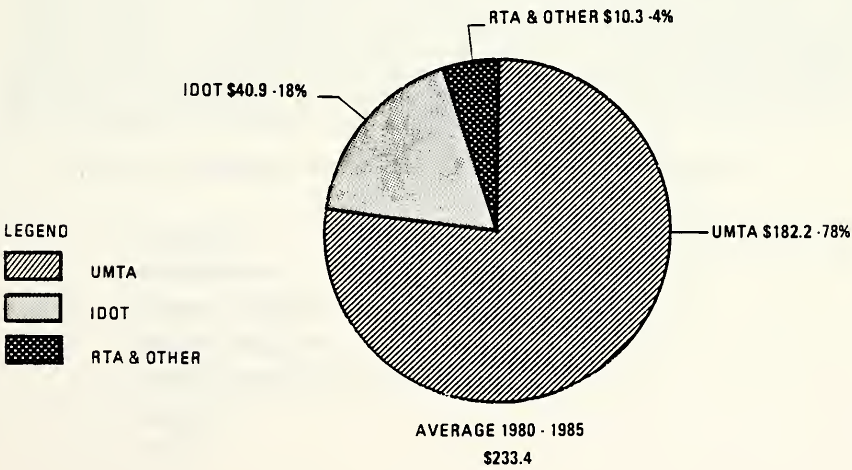


EXHIBIT 2-5

RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Sources of Capital Funds
1980 - 1985





NOTE: Excludes Interstate Highway Transfer funding

reserved its funds for transit improvements — principally the Howard-Dan Ryan rail connection and the development of the Southwest Rapid Transit Line. Since these funds have been previously targeted for specific improvements, they have been accounted for and excluded from this capital funding analysis.

Capital funds are allocated to Service Boards based on the capital program focus for the year, individual project/program merit, and past capital funding levels. Since the capital program has been predominately oriented to system modernization and renewal, the spending pattern has fairly closely matched each Service Board's capital asset inventory, with yearly variations largely due to the timing of major investments such as garage replacements, rolling stock replacements, etc.

The CTA has been the predominant recipient of capital support during the 1980-1985 period, receiving an average of $124.4 million (Exhibit 2-6). When combined with the capital grants awarded to the City of Chicago for the CTA (averaging $13 million for the period), the CTA has received, in average, 59 percent of capital funds available to the region. Capital grants received by the other Service Boards averaged $80.1 million (34 percent) for Metra, and $15.9 million (7 percent) for Pace. The RTA has the approval authority for all capital projects greater than $250,000 that are included in the capital program, as well as the authority to disburse capital funds to the Service Boards. While the RTA approves capital projects, the Service Boards apply directly to UMTA and Illinois DOT for capital grant funds.

2.1.4 Status of Physical Assets

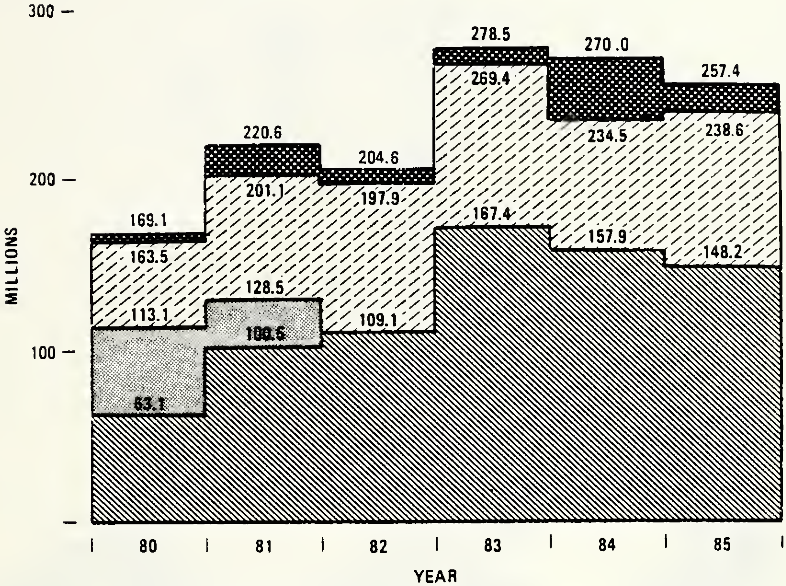
A physical asset inventory was developed by major line segment and principal budget category for each of the Service Boards. The present inventory indicates that the RTA's Service Boards operate with assets that have a current replacement value of about $15.4 billion (excluding land) (Exhibit 2-7). Of this amount, the Service Boards are responsible for about $13.6 billion; the balance is the responsibility of the carriers. Of the RTA's share of replaceable assets, CTA assets comprise 61.4 percent of this value, followed by Metra with 37.5 percent, and Pace with 1.1 percent. Metra's share of total asset value, however, is higher — 44.5 percent compared to 37.5 percent of total assets if consideration is given to assets owned by rail carriers.

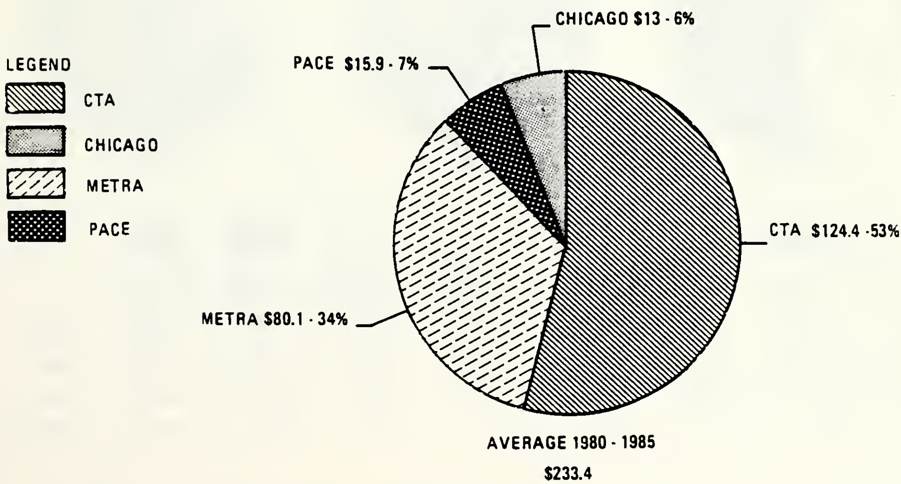
The capital assets operated by the three Service Boards include:

- Structures
- Rolling Stock
- Support Facilities
- Support Equipment
- Electrical/Signal/Communication
- Stations
- Track.

EXHIBIT 2-6
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Allocation of Capital Funds
1980 - 1985



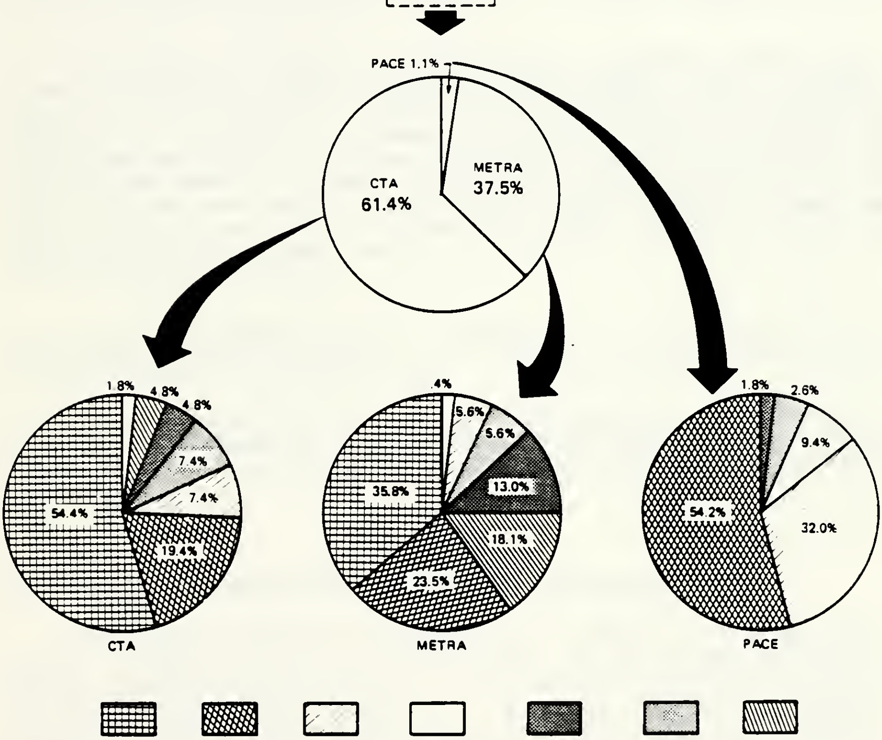


NOTE: Excludes Interstate Highway Transfer funding

EXHIBIT 2-7
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Replacement Value of RTA Assets - 1985
(Dollar Amounts in 000s)

	TOTAL ASSET VALUE	RTA SHARE OF ASSET VALUE
CTA	$8,382.6	$ 8,373.7
METRA	6,845.6	5,102.0
PACE	152.7	152.7
TOTAL	$15,380.9	$13,628.4



	STRUCTURES	ROLLING STOCK	SUPPORT FACILITIES	SUPPORT EQUIPMENT	ELECT/SIG/COMM	STATIONS	TRACK	TOTAL
CTA	$4,556.8	$1,626.4	$615.2	$150.3	$ 405.1	$616.9	$ 403.0	$ 8,373.7
METRA	1,826.3	1,197.0	286.2	18.6	668.9	285.3	820.7	5,102.0
PACE	–	82.9	48.8	14.4	2.6	4.0	–	152.7
TOTAL	$6,382.1	$2,906.3	$950.2	$183.3	$1,076.6	$906.2	$1,223.7	$13,628.4
% OF TOTAL	46.8%	21.3%	7.0%	1.3%	7.9%	6.7%	9.0%	100.0%

Of these, 68 percent of the Service Boards' assets are structures and rolling stock; with each comprising 46.8 percent and 21.3 percent of the total, respectively. The predominant assets in the structures group include bridges, which are mostly located on Metra rail lines, and the CTA elevated structure and tunnel network. Track (9.0 percent), support facilities (7.0 percent), electrical/signal/communication (7.9 percent) and stations (6.7 percent) represent fairly equivalent shares of the total; their replacement values range from $900 million to $1.2 billion.

The composition of assets operated by each Service Board is a reflection of the capital intensity of different modes. Pace, which operates bus and paratransit service only, is comparatively less capital intensive — nearly 86 percent of its assets are rolling stock and support facilities. Conversely, the capital intensity of rail operations is evident with CTA and Metra. Over half of CTA's and one-third of Metra's assets are structures.

Rolling stock represents the second largest component of assets. These assets are distributed among the Service Boards as follows: CTA - 56 percent; Metra - 41 percent; and Pace - 3 percent. Track is the third largest component $1.2 billion, or 9 percent, of all assets. Two-thirds of all track is operated by Metra; one-third by CTA. Electrical, signal and communications assets are the fourth largest category of assets — almost $1.1 billion, or 7.9 percent. Sixty-two percent of these assets are the responsibility of Metra; CTA has 38 percent; and Pace, less than one percent of the total. Major electrical, signal and communication assets include interlockers, substations, train control systems and electrical distribution systems.

CTA operates comparatively more assets in both the support facilities and stations groups. Support facilities include bus garages and yards; stations includes both rail stations and bus terminals.

The development of the RTA's Service Board capital inventory serves as the first step in developing the thirty-year Bedrock Investment Program. Further discussion of the Bedrock Investment Program is provided in Section 3.3-Capital Funding Needs.

2.2 PUBLIC TRANSPORTATION FACILITIES AND SERVICES

The six-county Chicago metropolitan area is served by the three Service Boards — Chicago Transit Authority (CTA), Commuter Rail Division (Metra), and Suburban Bus Division (Pace). Trends in service, revenues and costs during the 1980 to 1985 time period provide a perspective on both the impacts of the financial crisis that occurred in the 1980-1982 period (necessitating major fare increases and selective service reductions) and the more recent trends under the "new RTA's" organizational relationship and financing arrangements. The profiles of the operating performance for each Service Board reflect this period of change.

2.2.1 Chicago Transit Authority

The CTA has provided bus and rapid rail transit service to the City of Chicago and adjoining suburbs for almost 40 years. This service is operated 24 hours a day, seven days a week, over 135 bus routes and six rapid rail lines. The vehicle fleet utilized for the provision of this service is approximately 2,300 buses and 1,200 rail cars. A workforce of 12,000 employees operates the combined bus and rail transit system. Total operating expenses were $587 million in 1985. These combined resources furnished mobility for more than 644 million passenger trips in 1985.

2.2.1.1 CTA Financial Performance

The CTA's financial performance over the last six years (1980-1985) illustrates the major retrenchment forced by the financial constraints of the Spring of 1981, followed by a period of relative stability and partial service restoration (Exhibit 2-8). Public funding requirements (operating expenses less system-generated revenue) dropped from a high in 1980 of $298 million to a low in 1982 of $222 million. CTA's 1985 public funding requirement of $290 million is still lower than 1980's requirement. Since the low point in 1982, CTA's system expenses have been rising again at a rate above system-generated revenue. This trend has resulted in a steady decline in operating recovery ratio, especially when the 1984 one-time revenue of $11 million is excluded.

2.2.1.2 CTA Market and Level of Service Trends

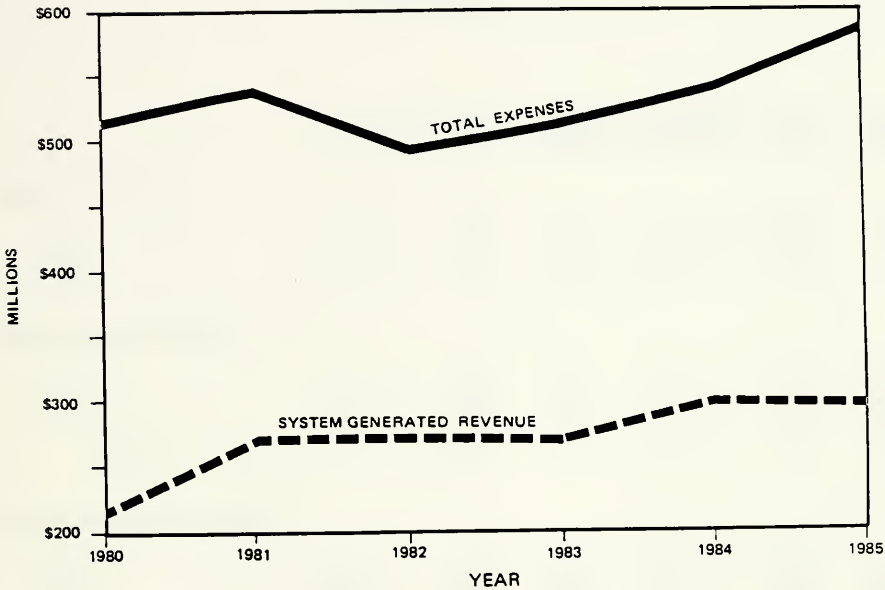
Service and ridership levels (Exhibit 2-9) over the 1980-1985 time period illustrate the combined effects of service reductions and fare increases required because of the financial constraints of 1980-1982. Since 1982, fares and service levels have stabilized and ridership has steadily increased. Also during this same time period the economy improved from the recession of 1981 resulting in increased employment and travel demand. While ridership has increased, service levels (in revenue vehicle miles) have been maintained at reduced levels, resulting in improved CTA system service delivery effectiveness from the viewpoint of passengers per vehicle mile.

2.2.1.3 CTA Cost and Revenue Trends

The per-passenger operating cost trends presented in Exhibit 2-10 illustrate the cost control focus of recent years. Except for the increase from 1980 to 1981, bus cost per passenger has been flat — actually decreasing when inflationary effects are considered. Rail service cost per passenger increased 16 percent, from $1.12 in 1980 to $1.30 in 1984, but was still less than inflation, as the Chicago CPI increase was 19 percent for the same time period. The bus system is generally more cost effective per passenger than the rail system since bus trip lengths are shorter, and rail has higher facility maintenance costs. The rail system is more cost effective than the bus system when cost per passenger mile is used as a performance indicator.

EXHIBIT 2-8
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

CTA Financial Summary
1980 - 1985



CTA FINANCIAL DETAIL ($s in Millions)

	Calendar Year					
	1980	1981	1982	1983	1984	1985
Total System Expenses	$515.3	$539.9	$511.6	$518.6	$542.5	$587.0(3)
System Generated Revenue	$216.7	$269.4	$271.4	$269.0	$299.0(2)	$297.0
Annual Recovery Ratio(1)	42.1%	50.0%	55.0%	52.6%	55.3%	50.6%

(1) Ratio represents the individual year's performance without use of carryover, computed by dividing system-generated revenue by operating expenses.

(2) Includes a one-time revenue amount of $11 million resulting from dissolution of the CUTD.

(3) Includes the resumption of pension funding suspended during 1981-1984 at $10 million, and an increase in damage reserve for insurance claims of $4.5 million.

SOURCE: CTA Budget Department

EXHIBIT 2-9
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

CTA Service and Ridership Summary
1980 - 1985

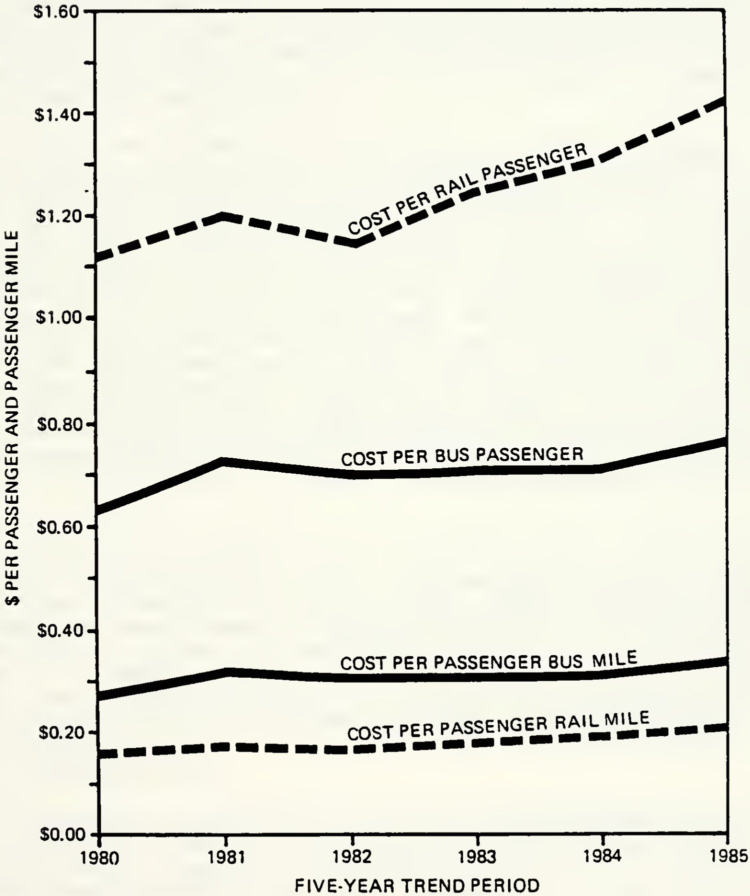
	Calendar Year					
	1980	1981	1982	1983	1984	1985
Active Vehicle Fleet						
. Bus	2,420	2,442	2,298	2,317	2,317	2,317
. Rail	1,100	1,100	1,126	1,200	1,200	1,200
Revenue Vehicle Miles(1)						
. Bus	87.7	85.9	80.4	78.3	76.1	75.4
. Rail	49.6	48.5	45.9	48.1	47.5	48.4
TOTAL	137.3	134.4	126.3	126.4	123.6	123.8
Passenger Trips (Unlinked)(1)						
. Bus	537.7	492.6	467.1	464.5	482.2	486.5
. Rail	155.4	150.2	147.0	146.9	153.1	155.5
TOTAL	693.1	642.8	614.1	611.4	635.3	642.0
Employment Levels						
. Administration	1,226	1,139	943	929	992	1,012
. Bus	8,148	7,809	7,620	7,415	7,446	7,447
. Rail	3,939	3,826	3,653	3,726	3,731	3,735
TOTAL	13,313	12,774	12,216	12,070	12,169	12,194

(1) Annual statistics in millions.

SOURCE: CTA Budget Department

EXHIBIT 2-10
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

CTA Per-Passenger Operating Cost Trends
1980 - 1985



The operating cost and system-generated revenue per level of service vehicle mile (car mile for rapid transit) is presented in Exhibit 2-11. The total cost per vehicle mile shows an increasing trend in recent years — exceeding the CPI for both modes. Bus service cost per mile has increased 26 percent, while rail service has increased 27 percent. Bus service, as expected, has a higher cost per mile than rail, but the difference has narrowed in recent years. A significant contributing factor to the increase in rail costs has been the cost of electric power which has nearly doubled between 1980 and 1985. Excluding power costs for rail and fuel costs for bus, the rail system has had a lower cost growth than the bus system.

On the revenue side, there has been a general increase throughout the 1980-1985 period, with bus consistently producing higher revenue per mile than rail. Fare increases of 1981 account for this improvement during 1981 and 1982, while ridership increases (at constant fares) have accounted for revenue growth in the later years. Selective reductions in vehicle miles for both systems, but especially bus, have increased revenue per mile.

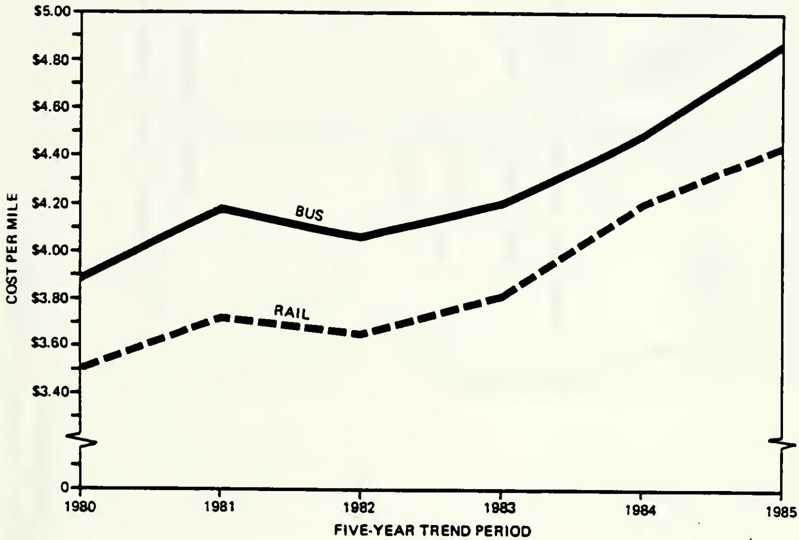
An internal cost center comparison indicates the relative operating and capital cost per passenger levels for services operated out of individual CTA bus garages (Exhibit 2-12). Performance of services provided by each bus garage indicate only minor variations in operating cost per passenger — even though significantly different cost and passenger levels occur at each facility. This indicates that resources are being reasonably well allocated across bus divisions and rail lines. The bus facilities vary due mostly to the concentration of express bus service out of North Park and Archer garages, and the commensurately higher operating costs due to peak hour concentrated services. The increased costs associated with this express service is more apparent on the capital cost per passenger chart. Kedzie garage as well as North Avenue and 77th Street garages perform well because of higher midday ridership levels. The service type differences among garages cause the unit capital costs to vary from the system average. Express services have both higher operating and capital costs compared to regular fixed-route service, and may be a candidate for increases in premium pricing.

On the rail system (Exhibit 2-13) the West-South and the West-Northwest Lines exhibit lower operating performance levels because in both cases a heavy ridership branch is connected to a lower ridership branch, causing unbalanced service supply and demand levels. Modification to the system — the Howard-Dan Ryan connection — is underway to reduce this imbalance. The West-Northwest Line also has a relatively longer line to O'Hare Airport, resulting in higher operating costs. The Ravenswood Line is performing above average because of growing ridership and lower costs due to partially shared right-of-way; the North-South Line's above average performance is due to high ridership levels in both peak and off-peak hours.

The comparative performance from a capital viewpoint illustrates the impact of structure costs: below average lines require greater replacement and rehabilitation costs for structures. The recent premium pricing of the rail system could be extended to include distance-based increases on the longer rail lines to more closely match fares with the higher unit costs associated with rail services.

EXHIBIT 2-11
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

CTA Level of Service Cost and Revenue Trends
1980 - 1985



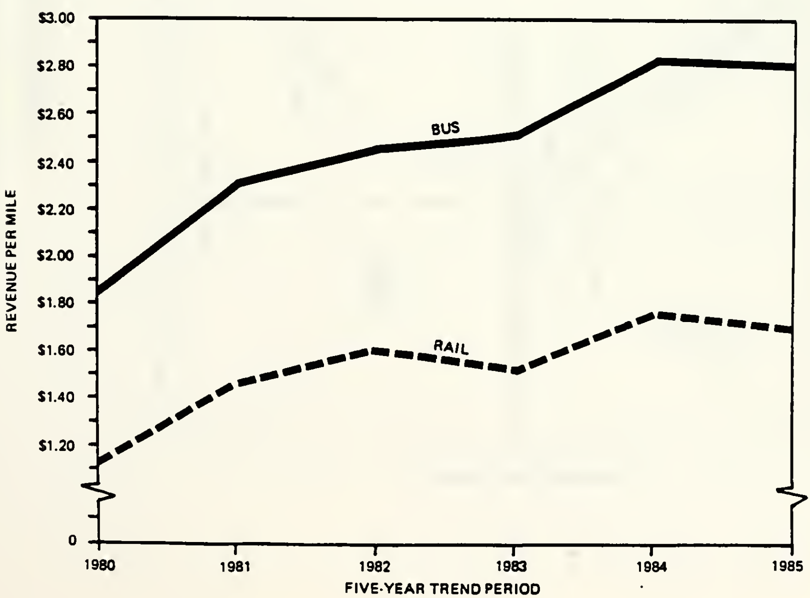
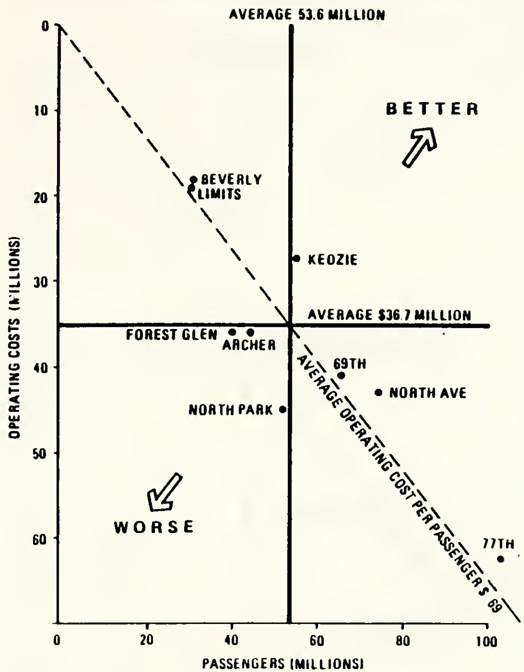


EXHIBIT 2-12
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Operating and Capital Cost Center Comparison
CTA Bus Garages

CTA - BUS OPERATING COSTS VERSUS PASSENGERS



CTA - BUS CAPITAL COSTS VERSUS PASSENGERS

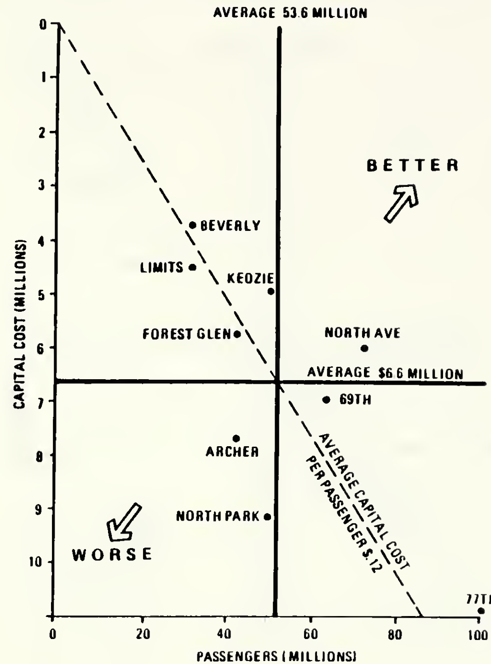
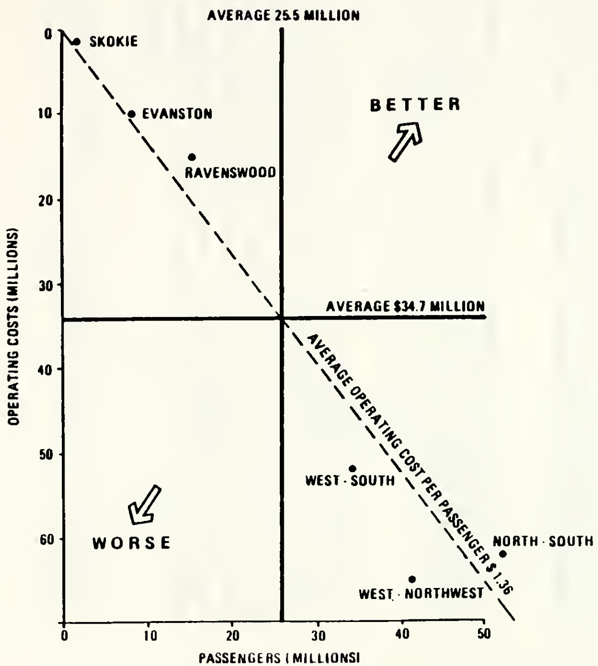


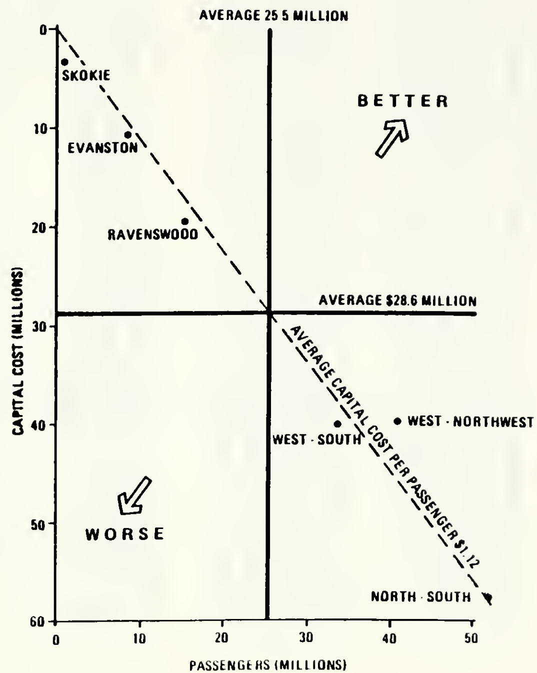
EXHIBIT 2-13
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Operating and Capital Cost Center Comparison
CTA Rail Lines

CTA - RAIL OPERATING COSTS VERSUS PASSENGERS



CTA - RAIL CAPITAL COSTS VERSUS PASSENGERS



2.2.1.4 Status of CTA Physical Assets

The CTA system represents a considerable investment in physical plant and equipment. The bus system includes over 2,300 buses, nine garages, one major shop, plus assorted support facilities and equipment. This system has a total asset replacement cost of more than $6.85 billion. Substantially larger is the rapid rail system which has a replacement cost of almost $7.7 billion. The CTA rapid rail network includes 250 miles of track, 143 stations and 1,200 rail vehicles.

The major assets in the bus system are the revenue vehicles used to operate service and the garages used to maintain buses. The age distribution for the bus fleet shows an uneven procurement cycle with a major proportion (34 percent) exceeding the standard useful life of 12 years (Exhibit 2-14). Almost half of the bus garages also exceed their life expectancy. This demonstrates an inadequate capital replacement program which tends to increase maintenance cost beyond normal.

The major assets on the CTA rapid rail system include rail cars, stations, track and elevated structure. Exhibit 2-15 illustrates the age distribution of vehicles and stations. The life expectancy of the CTA rail fleet is 24 years, except for certain vehicles which were rehabilitated to extend their life to 37 years. The recent major procurement of rail cars helped the CTA revitalize their aging fleet and retire outmoded equipment.

The average age of CTA rail stations is 55 years, with a life expectancy of 70 years. Forty-three percent of these stations have exceeded their useful life and are as much as 30 years beyond their replacement timetable (Exhibit 2-15).

As evidenced in Exhibit 2-16, the CTA has invested heavily in recent years in the replacement of aging track. Life expectancy of track varies between 25 and 40 years, depending on the type of right-of-way (elevated, at-grade and subway); the average age of CTA track is 15 years.

The elevated structure is far beyond life expectancy (75 years) with an average age of 82 years. This average age is particularly problematical since 92 percent of the structure is beyond useful life and in need of major replacement and/or rehabilitation. The need for and capital costs of elevated structure will place priority pressures on the near term CTA capital program.

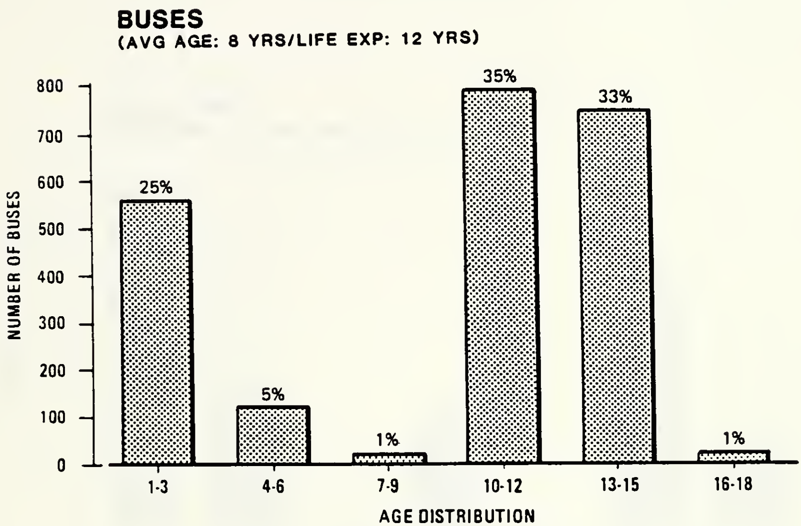
In general, the CTA asset base is in need of a major rehabilitation and replacement effort. Certain asset categories are being operated beyond their useful lives, increasing maintenance costs and decreasing the quality of system operations. The deferred capital costs for the CTA were estimated at over $1.8 billion — $1.5 billion for rail and $0.3 billion for bus. The funding of the current capital program does not meet the needs of the regular asset replacement cycles, not including the deferred capital costs. Major investments in CTA asset replacements will be required in the near future to tackle this capital problem before safety issues are raised.

* * * * *

Overall, the CTA has demonstrated an increased service effectiveness over the last five years — less service for almost comparable ridership. Cost efficiency

EXHIBIT 2-14
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

CTA-Bus Asset Age Distribution - 1985
Buses and Garages



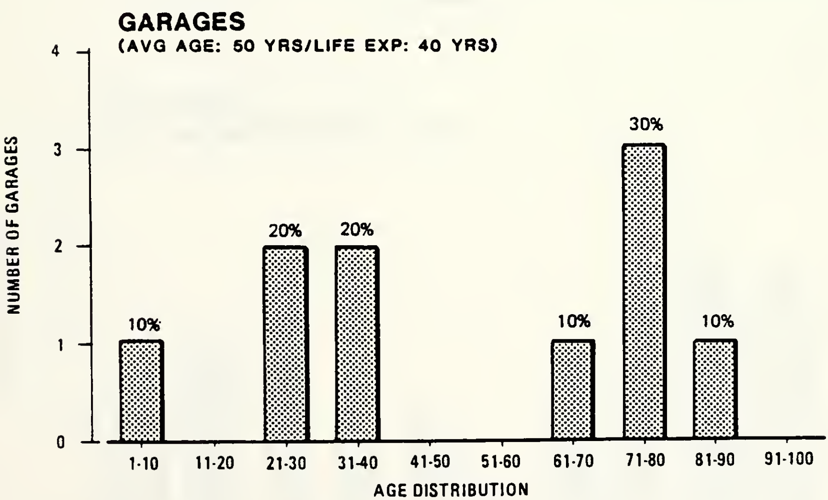
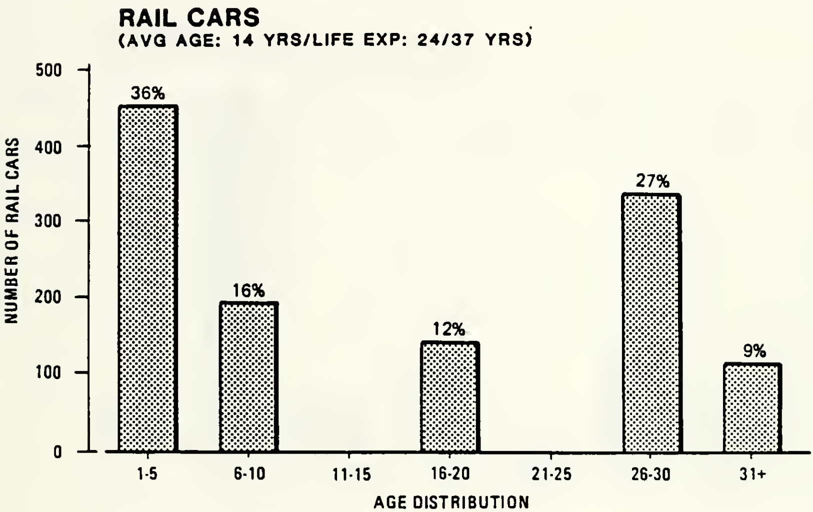


EXHIBIT 2-15
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

CTA-Rail Asset Age Distribution - 1985
Vehicles and Stations



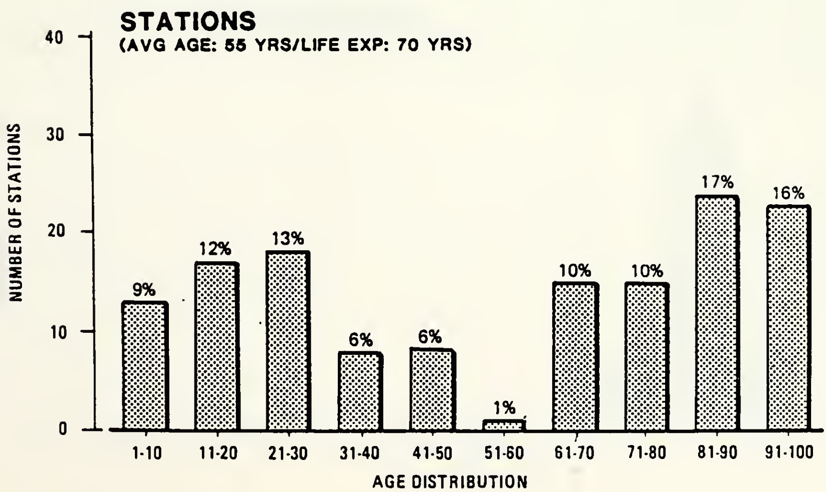
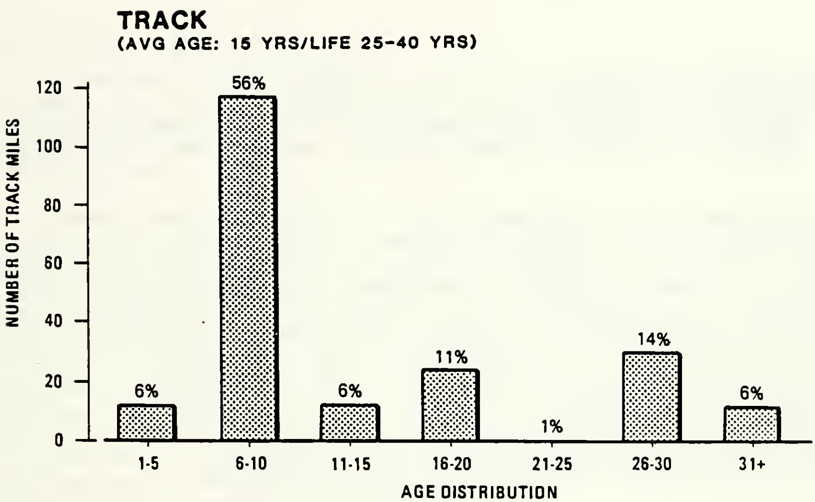
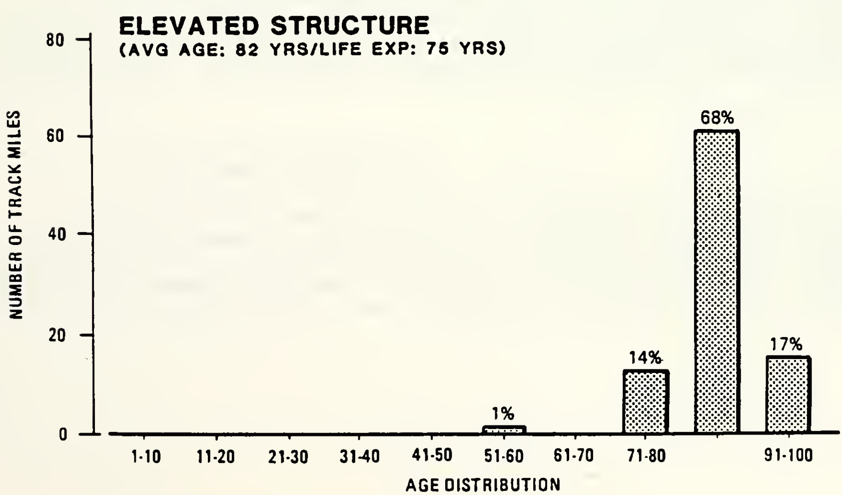


EXHIBIT 2-16
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

CTA-Rail Asset Age Distribution - 1985
Track and Elevated Structure





had improved significantly between 1980 and 1983, but recent results indicate escalating cost trends. Revenue increases have been due to ridership growth, since the fare structure has remained constant since 1982. The operating side of the CTA has a positive outlook for the near future; the more near term threat will come from capital replacement, where the shortfall is fairly significant. The recent diversion of positive budget variances to capital is in recognition of this need. However, the capital shortfall will need further funding in the near future to avoid accelerated deterioration and increasing concerns for operational safety.

2.2.2 Metra

Metra was formally established in November 1983. Also known as the Commuter Rail Division (CRD), Metra has responsibility for Illinois-based commuter rail services in the Chicago area, exercising authority in setting fares, schedules and service levels, upgrading facilities, track and vehicles, and maintaining service.

Before being established as Metra, commuter rail operations were administered through the RTA and operated by private railroads with the RTA defining service levels and providing financial support. The Northeast Illinois Railroad Corporation (NIRC) was established in June 1981 to operate the bankrupt Rock Island Service, after an interim period of operation by the Chicago and Northwestern Railroad under contract to the RTA. The Milwaukee Road Railroad also filed for bankruptcy in the late 1970s; the RTA, through NIRC, assumed operation in October 1982. Thus, while Metra was only officially formed in November 1983, many of its current functions were already the responsibility of NIRC. In recognition of this fact, the RTA Transition Board stated formally that "references to the Commuter Rail Service Board and the Commuter Rail Division should be read to include NIRC, performing its functions as staff of the Commuter Rail Service Board and the Commuter Rail Division."

Metra continues to operate the Rock Island and Milwaukee Road services, and has renegotiated purchase-of-service agreements (PSAs) with five other railroads to provide service on thirteen distinct lines serving all six counties of the RTA service area (Exhibit 2-17). In 1985, over 64 million passenger trips were made on the Metra system — a rail network comprised of 495 miles of line and 230 stations (Exhibit 2-18).

2.2.1 Metra Financial Performance

A review of Metra financial statistics for the 1980-1985 time period shows an increasing deficit caused by rising costs and relatively level system revenues (Exhibit 2-19). Costs rose fairly steadily from $166 million in 1980 to $237 million in 1985 at an average annual rate of 7.5 percent. The smallest increase occurred from 1981-1982 when costs rose only 4.3 percent due largely to service cuts.

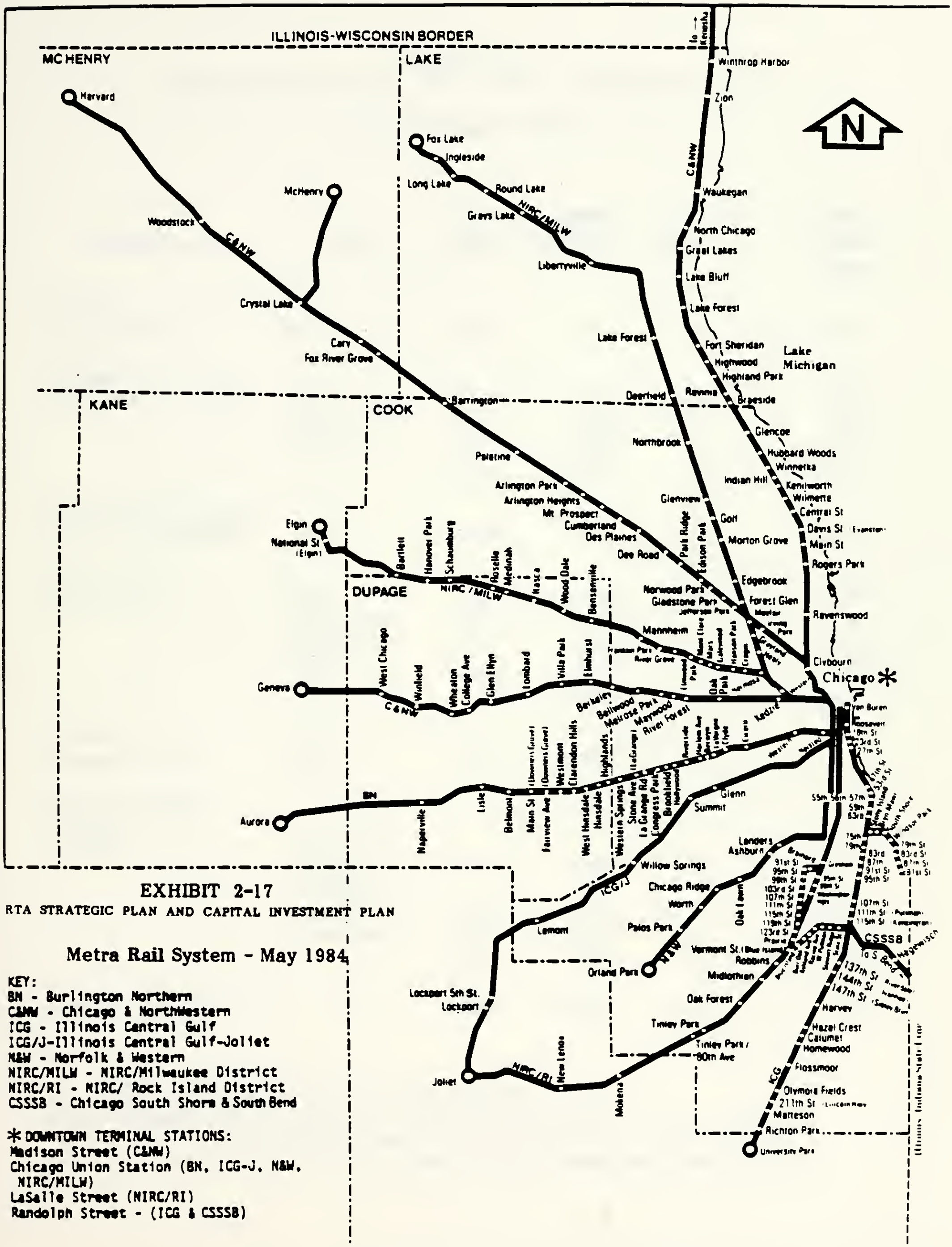


EXHIBIT 2-17

RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Metra Rail System - May 1984

KEY:
BN - Burlington Northern
C&NW - Chicago & NorthWestern
ICG - Illinois Central Gulf
ICG/J-Illinois Central Gulf-Joliet
N&W - Norfolk & Western
NIRC/MILW - NIRC/Milwaukee District
NIRC/RI - NIRC/ Rock Island District
CSSSB - Chicago South Shore & South Bend

* DOWNTOWN TERMINAL STATIONS:
Madison Street (C&NW)
Chicago Union Station (BN, ICG-J, N&W, NIRC/MILW)
LaSalle Street (NIRC/RI)
Randolph Street - (ICG & CSSSB)

EXHIBIT 2-18
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

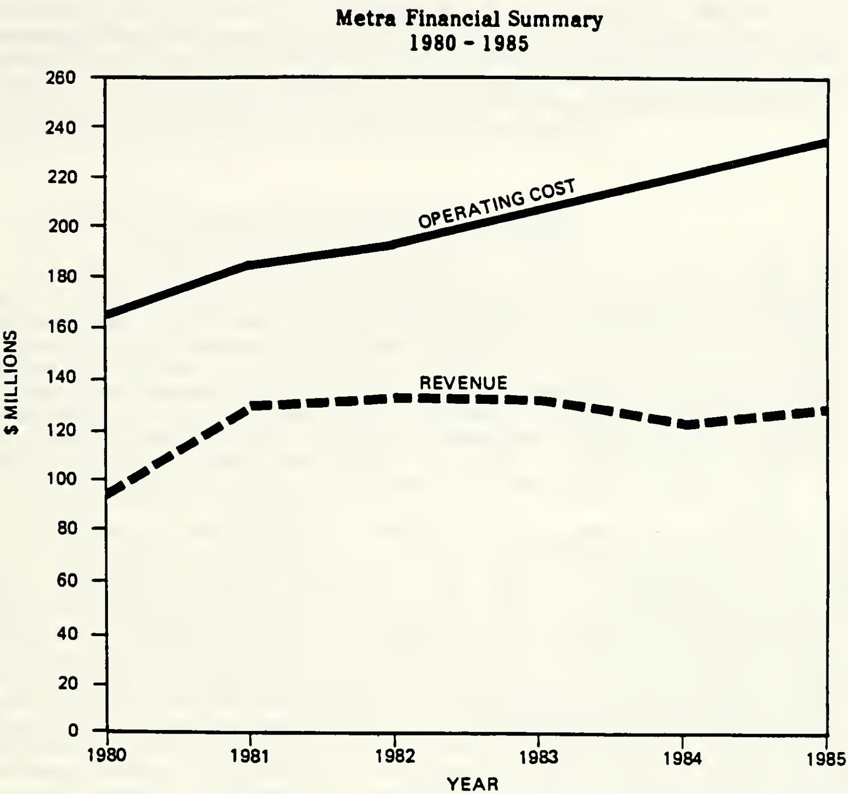
Metra Rail Line Profiles

Railroad	Line	Route Miles	Track Miles	Stations[1]	1985 Ridership (000s)
Burlington Northern (BN)	Main	38.0	145.6	26	12,203
Chicago & Northwestern (CNW)	North	51.6	107.5	26	6,078
	Northwest[2]	67.6	166.5	22	8,963
	West	35.5	128.0	17	7,003
		154.7	402.0	62 (1)	22,044
Chicago, South Shore & South Bend (CSSSB)	Main[2]	73.6	91.0	25	2,951 (3)
Illinois Central Gulf (ICG)	Main	31.5	108.4	34	8,974
	Blue Island	4.4	5.0	7	551
	So Chicago	4.7	11.3	8	1,431
	Joliet	37.2	78.0	8	367
		77.8	202.7	56 (1)	11,323
Norfolk & Western (N&W)	Main	23.6	38.6	8	1,051
Northeast Illinois Railroad Corp. (NIRC)	Milwaukee - North	49.5	104.3	19	4,100
	Milwaukee - West[2]	31.2	65.5	22	4,355
	Rock Island	46.8	144.6	24	6,460
		127.5	314.4	63 (1)	14,915
SYSTEM TOTAL		**495.2**	**1,194.3**	**230**	**64,487**

(1) Station stops adjusted to avoid double counting.
(2) Route and track miles adjusted to avoid double counting.
(3) Estimate for total CSSSB ridership; Metra provides 18% of CSSSB subsidy.

SOURCE: Metra System Description Report, Metra Planing and Analysis Division.

EXHIBIT 2-19
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN



METRA FINANCIAL DETAIL ($s in Millions)

	Calendar Year					
	1980	1981	1982	1983	1984	1985
Total System Expenses	$165.5	$185.8	$193.8	$206.6	$222.9	$237.2
System Generated Revenue	$93.4	$129.3	$133.8	$131.8	$123.8	$130.3
Annual Recovery Ratio(1)	56.5%	69.6%	69.1%	63.8%	55.6%	54.9%

(1) System recovery ratio is calculated by dividing revenue by expense

SOURCES: Metra Planning & Analysis Division; Metra Treasury & Finance Division; RTA Budget Division

Meanwhile system revenues, which increased nearly 40 percent in response to fare increases during the second year (from $93 million in 1980 to $129 million in 1981) leveled off near the $130 million mark for the remainder of the period due to lower ridership. The 1985 system revenue of $130 million is lower than the peak revenue of the period ($134 million in 1982) due to two reductions in the crisis-imposed fare structure and the slow return of riders to the Metra system.

2.2.2.2 Metra Market and Level of Service Trends

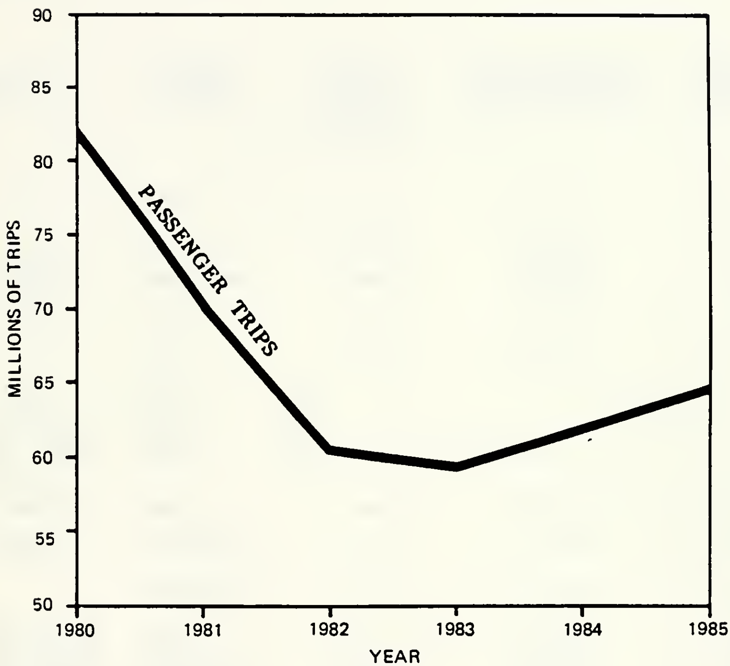
Metra's ridership and service levels have improved in 1984 and 1985 after large declines in 1981 and 1982. Exhibit 2-20 highlights the systemwide passenger and passenger mile totals for the 1980-1985 period. Increased fares, decreased service levels and generally depressed economic conditions led to a ridership decline of 28 percent, from 82 million trips in 1980 to 59 million trips in 1983. Ridership has increased to more than 64 million annual trips in 1985 due to lower fares, modest service increases, and an aggressive marketing program. Passenger miles have followed the same pattern as passengers, dropping from 1.7 billion in 1980 to 1.2 billion in 1983 before rising to 1.4 billion in 1985. However, 1985 totals for both passengers and passenger miles are 21 percent lower than 1980 levels.

An internal comparison of ridership trends reveals a wide range of performance for Metra's lines over the same 1980-1985 period (Exhibit 2-21). In 1985, the three largest lines were the BN, the ICG-Mainline and the CNW-Northwest, which together accounted for almost one-half of the total Metra ridership. The CSSSB and the ICG-Joliet have posted ridership increases of 40 percent and 9 percent since the beginning of the period, contrasted with an overall decline of 21 percent in systemwide ridership. The lines with the largest percentage declines are the CNW-North and Northwest, the ICG total electric lines, and the Milwaukee North and West - all have lost 25 percent or more of their 1980 ridership base. In the more recent 1983-1985 period, all of the lines have increased ranging individually from 0.3 percent to 29.3 percent — for an overall average increase of 8.9 percent. Again, the ICG-Joliet and the CSSSB had the largest increases, while the CNW-Northwest Line had the lowest gain in ridership. Looking at the lines in relation to their geographic locations, the North, Northwestern and Southern Lines (except for the CSSSB) have suffered above average declines in ridership over the 1980-1985 period, while the West and Southwestern Lines retained a larger amount of their earlier ridership.

Metra service levels as measured by car miles and scheduled train trips have rebounded from early period declines (Exhibit 2-22). Service reductions between 1980 and 1982 decreased car miles and scheduled trains by 13 percent to 27.5 million miles and 3,384 trains, respectively. Service has been selectively reinstated to 29.0 million car miles and 3,457 train trips per week in 1985, although these service levels are still below those of 1980. The majority of service reductions occurred in the off-peak period. The number of peak period scheduled trains in 1985 was 96 percent of the 1980 level; the off-peak period trains were only 83 percent of their 1980 level.

EXHIBIT 2-20
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

METRA Service and Ridership Summary
1980 - 1985



	Calendar Year					
	1980	1981	1982	1983	1984	1985
Passenger Trips (Millions)	81.9	70.1	60.5	59.2	62.1	64.5
Passenger Miles (Millions)	1,693.5	1,463.3	1,266.1	1,246.1	1,314.3	1,367.2

SOURCE: Metra Planning and Analysis Division

EXHIBIT 2-21
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Metra Ridership Trends by Line
1980 - 1985

Carrier/Line		General Location	1985 Ridership (Millions)	Percent Change from 1980-1985	Percent Change from 1983-1985
BN		West	12.20	-15.5%	+ 7.3%
CNW	North	North	6.08	-29.6%	+ 5.3%
	Northwest	Northwest	8.96	-32.6%	+ 0.3%
	West	West	7.00	-17.0%	+ 8.1%
CSSSB		South	2.95	+40.3%	+17.1%
ICG	Main	South	8.97	—	—
	Blue Island	South	0.55	—	—
	So Chicago	South	1.43/	—	—
	Total Electric	South	10.96	-26.4%	+12.5%
	Joliet	Southwest	0.37	+ 8.8%	+29.3%
N&W		Southwest	1.05	- 8.9%	+11.7%
NIRC	Milw-North	North	4.10	-25.2%	+11.3%
	Milw-West	Northwest	4.36	-27.0%	+11.0%
	Rock Island	Southwest	6.46	- 9.8%	+16.6%
TOTAL			64.49	-21.3%	+ 8.9%

SOURCE: Metra Planning and Analysis Division.

EXHIBIT 2-22
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Metra Five-Year Service Summary
1980 - 1985

	Calendar Years					
	1980	1981	1982	1983	1984	1985
Car Miles (in Millions)	31.6	30.5	27.6	27.5	28.2	29.0
Scheduled Trains by Time Period (1)						
. Weekday	314	312	314	314	302	302
. Weekday Off-Peak	345	271	272	272	295	299
. Saturday	365	286	291	291	289	291
. Sunday	249	159	163	163	165	161
. Weekly Trains	3,909	3,360	3,384	3,384	3,439	3,457

(1) Weekly totals for each year calculated based on last published timetable for that year; if no timetable for a specific year was available, previous year's schedule was used.

SOURCES:

Car Miles: Metra Planning and Analysis Division.

Scheduled Trains: Developed from Metra-supplied carrier timetables in effect over the five-year period and Metra preliminary FY 1986 budget.

2.2.2.3 Metra Cost and Revenue Trends

Metra operating cost per passenger and passenger mile have nearly doubled over time, but the rate of increase declined toward the end of the period (Exhibit 2-23). Systemwide costs per passenger rose from $2.06 in 1980 to $3.82 in 1985 — increasing at average annual rates of 16 percent between 1980 and 1982 before slowing to 6 percent for the remainder of the period. Cost per passenger mile growth trends were similar, rising from $0.10 in 1980 to $0.18 in 1985. The larger increases from 1980-1982 reflected the large passenger declines occuring at that time while operating costs continued to rise.

A review of Metra cost efficiency measures from 1980 to 1985 showed operating cost per car mile rising steadily, while revenue per car mile increased overall but varied significantly due to both fare structure and ridership changes throughout the period (Exhibit 2-24). The cost per car mile increased from $5.54 in 1980 to $8.68 in 1985, with year-to-year increases varying from 3.5 percent between 1983 and 1984, and 15.3 percent between 1981 and 1982. The high cost per mile increase from 1981 to 1982 contrasted to the relatively low $8 million increase in operating cost indicated that the cost containment was mostly due to service reductions (3 million car miles) rather than cost efficiencies. Revenues per car mile matched the total revenue trends — an increase from $3.12 in 1980 to $4.77 in 1982 as fare increases were put into effect and service cuts instituted; a decrease occurring mid period as fares were cut and service was slowly reinstated; and an increase from 1984 to 1985 as revenue rose from increased ridership.

Exhibit 2-25 plots the relative contribution of operating and capital costs by the thirteen rail lines in the Metra system versus their respective ridership for 1985. Operating cost by line includes allocations between lines of the same railroad (CNW, ICG, NIRC) by car mile, and assumes a 10 percent reallocation of NIRC costs to all thirteen lines on a passenger car basis to represent centralized administrative expense. Capital costs include replacement and rehabilitation costs calculated by the Bedrock Program and averaged over thirty years; they do not include deferred capital costs.

Average operating cost per passenger was $3.82, based on average annual passenger levels of 4.8 million and average operating cost of $18.2 million for the thirteen lines in the system. Passengers ranged from 12.2 million on the Burlington Northern (BN) to less than 0.4 million on the Illinois Central Gulf (ICG) Joliet Line. Operating expense varied from $37.9 million on the ICG mainline to $1.8 million on the ICG-Joliet. The five smaller lines including the ICG-Joliet, ICG-Blue Island, the Chicago South Shore and South Bend (CSSSB), and the Norfolk & Western (N&W), grouped in the upper left hand portion of the exhibit, have little impact on the total system performance, representing less than 8 percent of the cost and 7 percent of total ridership for the system. Among the larger lines, the better performers included the BN and the Chicago and North Western West Line (CNW-West), while only the Milwaukee-North was worse than average. The primary reason for the BN's good performance is its high ridership, generated in a high density corridor. The BN also gains from sharing a larger amount of its maintenance-of-way costs with its freight service operating over the same route. The CNW-West Line operates in a similar service area, and also benefits from a

EXHIBIT 2-23
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Metra Per-Passenger Operating Cost Trends
1980 - 1985

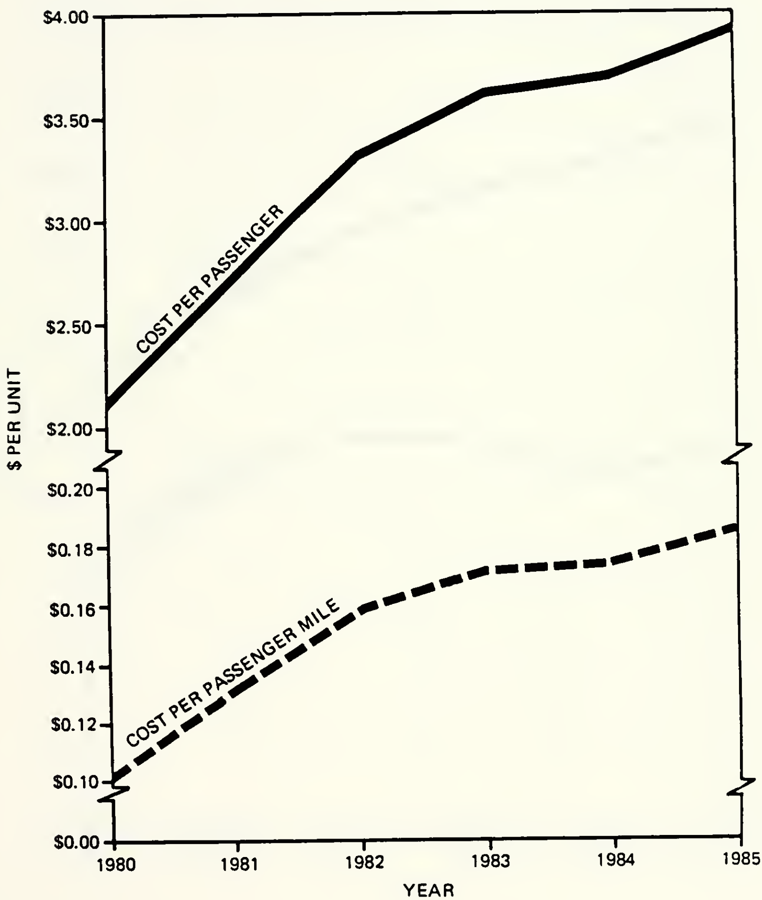


EXHIBIT 2-24

RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Metra Level of Service Cost and Revenue Trends
1980 - 1985

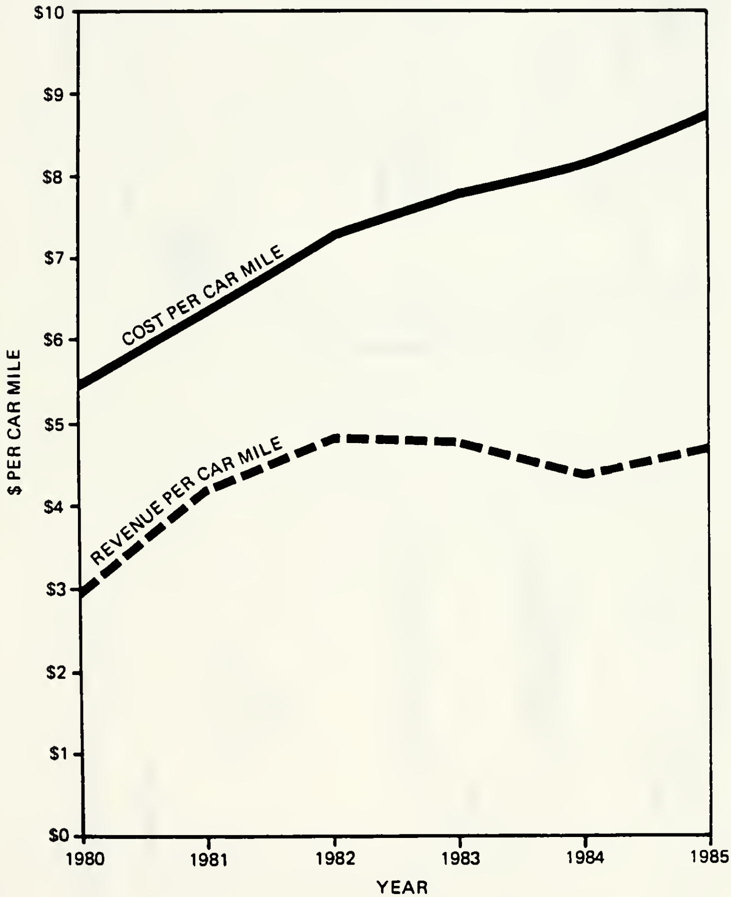
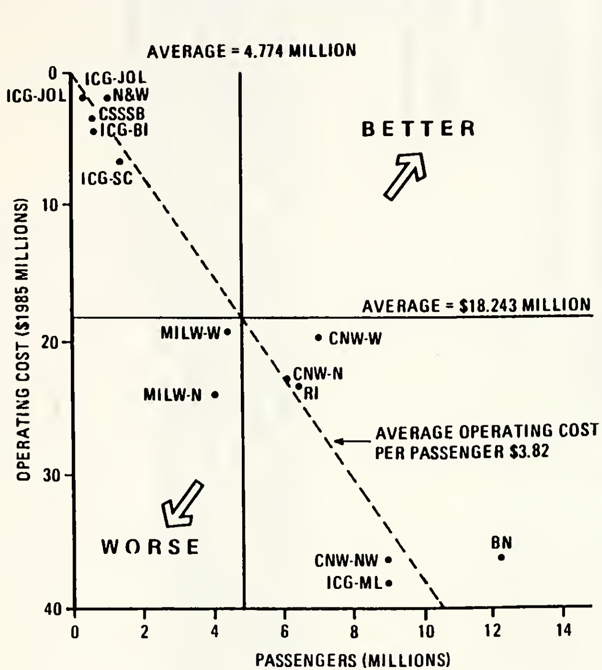


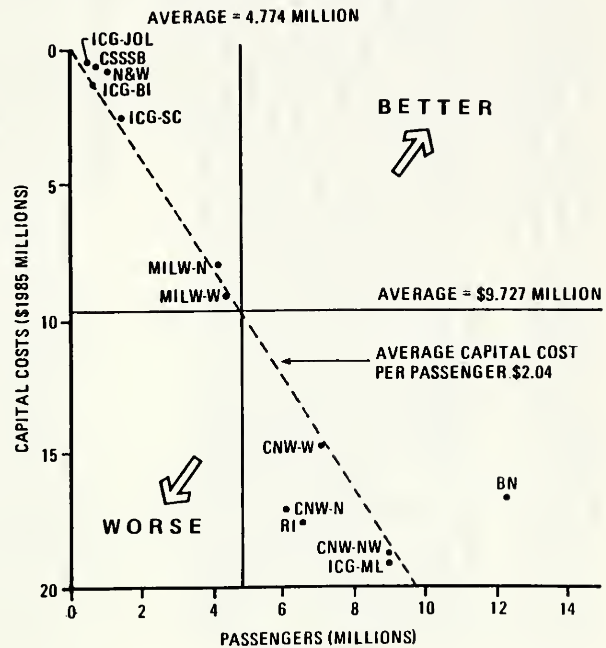
EXHIBIT 2-25
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Operating and Capital Cost Center Comparison
Metra Rail Lines

1985 METRA OPERATING COST VS. PASSENGERS



1985 METRA ANNUAL BIP CAPITAL COST VS. PASSENGERS



high freight share on the track it operates over. The Milwaukee North Line may be penalized by an insufficient allocation of centralized administrative expenses, but it also serves the second highest number of route miles in the system (50) and has low ridership on the outer half of its line.

Average capital cost per passenger was $2.04, based on an average capital expense of $9.7 million for each line in the system. Capital cost ranged from $0.4 million on the N&W, to over $19 million on the ICG mainline. The distribution across lines of capital costs was similar to that for the operating-cost-versus-passenger graph with distinct groups for the smaller and larger carriers. But among the larger lines, several shifts occurred. The BN was still the best performer, but the CNW-West and Milwaukee-North performed closer to the system averages. Two lines, the Rock Island (RI) and CNW-North performed worse than average. Again, the primary reason for the BN's good performance is its high ridership. BN also has a relatively high freight share, shifting a larger amount of capital cost to the private freight carrier. Both the CNW-North and the RI have extensive structural work on bridges due over the next thirty years, resulting in higher-than-average capital costs.

2.2.2.4 Status of Metra Assets

The commuter rail system under Metra's control is the second largest in the nation. The thirteen rail lines provide service over 1,450 miles of track and 563 bridges to 230 stations with 126 locomotives, 174 self-propelled passenger cars or electromotive units (EMUs) and 688 passenger cars which are serviced and stored at 24 yards. While a large amount of these physical assets are owned by Metra or the region's transit districts, ownership responsibility is sometimes shared or wholly taken by the private PSA carrier on whom Metra relies to operate service. The value of the assets used by the system total $6.8 billion, and Metra has direct responsibility for three-quarters ($4.9 billion) of that amount. Metra assets have been broken down into seven major functional categories:

- Electrical/Signal/Communications
- Rolling Stock
- Stations
- Support Facilities
- Support Equipment
- Track
- Structures

Assets fall into several subcategories within each major category (e.g., bridges, culverts, pedestrian subways and drains in structures), and have different replacement values and expected lives. Also, due to the size of the system, the number of carriers involved and past replacement patterns, all of the assets have different ages. The relative age of any asset affects both the quality of the existing service and the timing of capital cost requirements for the future replacement, or rehabilitation, of that asset.

Exhibit 2-26 highlights the maturity of Metra's bridges and signal interlockers. Bridges represent $1.5 billion, or 32 percent, of Metra's total assets, but 59 percent are over the average age of 70 years and must be replaced soon. The cost of replacement for these bridges is complicated by private railroad, Metra and highway funding shares issues. Signal interlockers make up almost 10 percent of total Metra asset value, and a large amount have reached replacement age. With an average age almost equal to their life expectancy (40 years), and 35 percent over the theoretical maximum age, service quality may be seriously degraded in the future if major maintenance or rehabilitation is postponed.

Metra's station buildings and support yards are not as old as their right-of-way infrastructure, but the average facility in both categories has passed the midpoint of its life (Exhibit 2-27). Overall, stations account for $285 million, or 6 percent of Metra's total assets. Station buildings reflect those costs associated with the structure of a station itself, not the exterior platform or parking lot lighting. The average age is 38 years, with 53 percent in their last 10 years of expected life, and 17 percent beyond this point. Station exteriors (not shown here) have a similar average age, but their lifespan of 25 years indicates the need for large scale rebuilding on most of the system's stations. Approximately $122 million of station replacement costs reside in the major downdown terminals (CNW passenger station and Chicago Union Station), which have recently undergone major rehabilitation programs though much additional work is still required. The 24 support yards also make up 6 percent of Metra's total asset value, but 15 will be at or beyond their useful life in the next 10 years.

Metra's rolling stock is divided into three types: locomotives and passenger cars are midway through their expected lives, and self-propelled cars (EMUs) are relatively new as shown on Exhibit 2-28. The locomotives are valued at $189 million (4 percent of Metra's total) with an average age of 15 years that is exactly half of their expected life of 30 years. However, 25 percent are currently older than 30 years, requiring upcoming replacement. Passenger cars represent 16 percent of Metra's total assets ($757 million), and also have average ages that are half of their expected life (20 years versus 40 years). The ages are fairly evenly distributed around the average with only 9 percent requiring replacement in the next 10 years. Metra's EMUs are valued at $261 million, or 5 percent of total assets, and all are in the first half of their useful lives. The majority (85 percent) are near the average age of 12 years, with none approaching the expected life of 36 years.

2.2.3 Pace

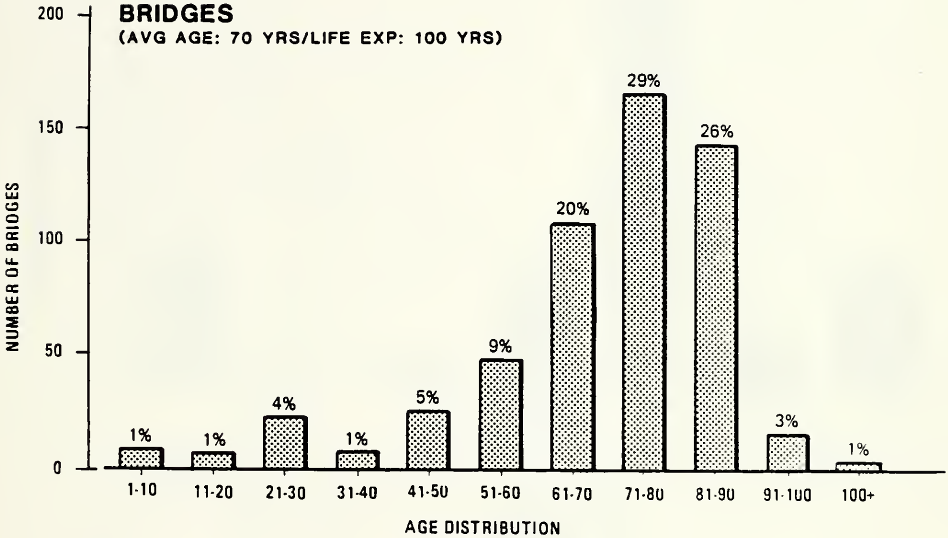
Pace, the Suburban Bus Division of the RTA, came into existence July 1, 1984. Pace provides bus and paratransit services to suburban Cook, DuPage, Kane, Lake, McHenry and Will Counties — serving an area of 3,446 square miles and a 1980 population of 4.1 million and employment of 1.7 million.

Pace owns and operates four suburban carriers and subsidizes the operations of ten municipal systems, providing funding support for 234 regular bus routes.

EXHIBIT 2-26
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Metra Asset Age Distribution - 1985
Bridges and Interlockers

BRIDGES
(AVG AGE: 70 YRS/LIFE EXP: 100 YRS)



INTERLOCKERS
(AVG AGE: 39 YRS/LIFE EXP: 40 YRS)

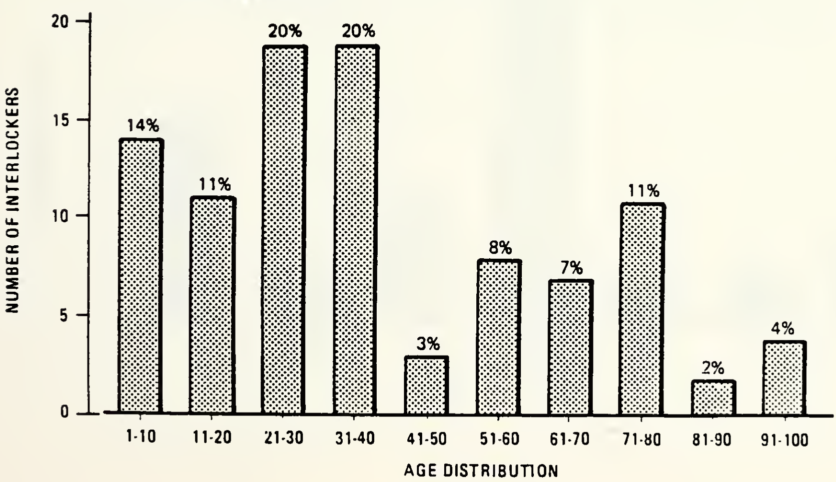
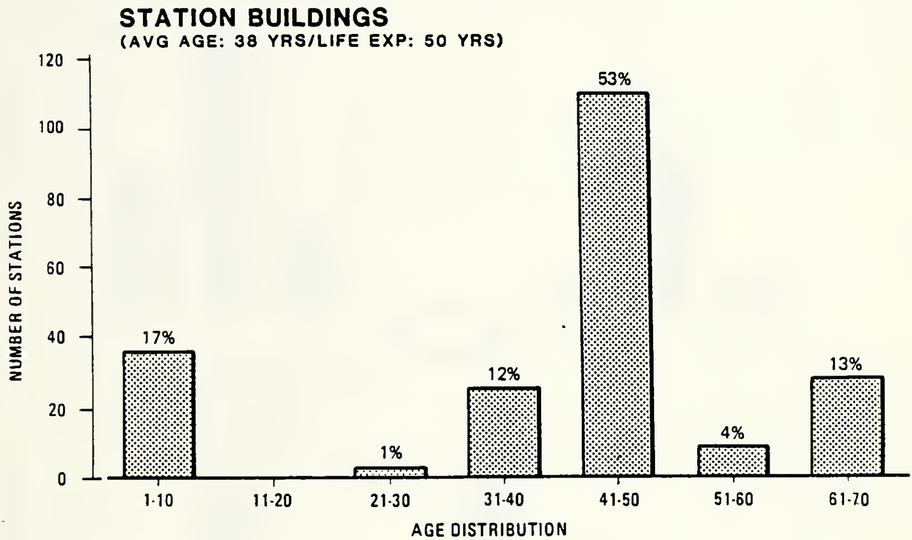


EXHIBIT 2-27
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Metra Asset Age Distribution
Station Buildings and Support Yards



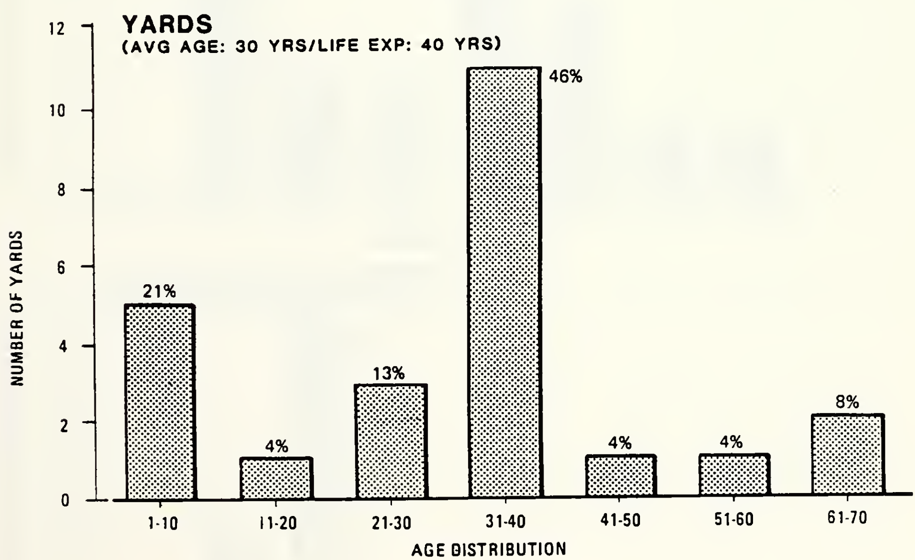
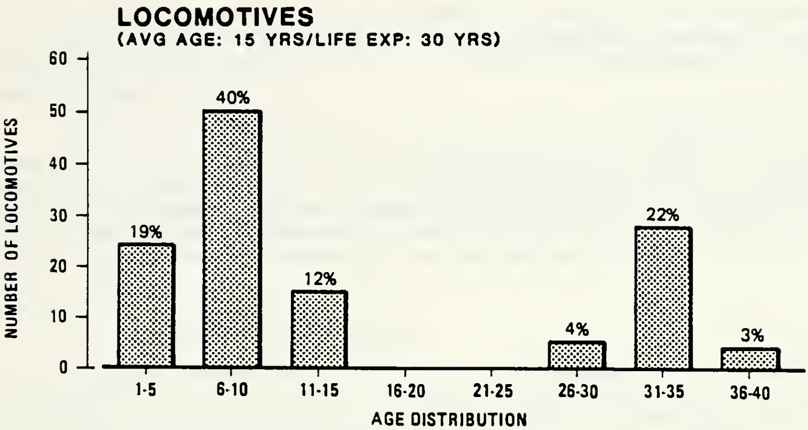
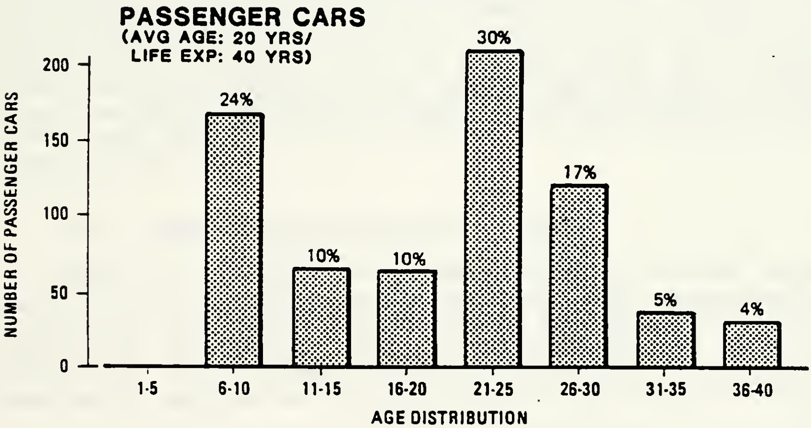
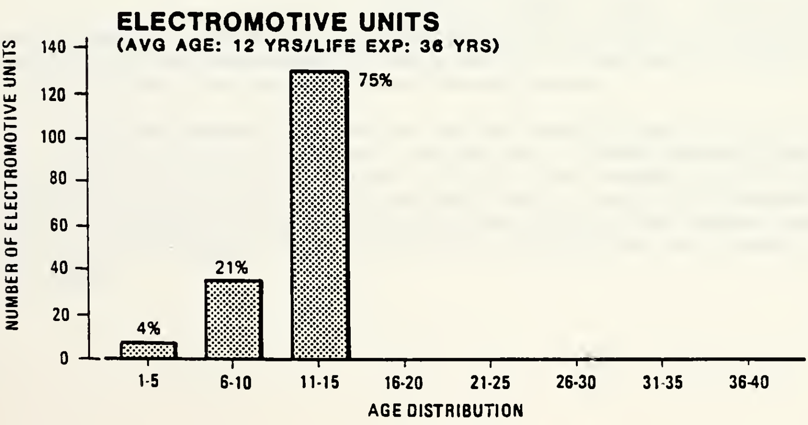


EXHIBIT 2-28
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Metra Asset Age Distribution - 1985
Rolling Stock







Additionally, Pace contracts with fourteen private bus companies for fixed-route services.

An extensive paratransit network covering 75 percent of the six-county area is supported through partial funding. These 58 subsidized paratransit services provide door-to-door transportation for the elderly and handicapped, and in some areas, the general public.

The provision of bus service in suburban areas of Chicago prior to the formation of the original RTA was accomplished predominately by private carriers. As these independents failed financially, some but not all individual municipalities assumed financial, management and operations responsibility. The RTA assumed financial responsibility over these systems in the 1970s; however, municipal operations were managed and operated as they are today.

2.2.3.1 Pace Financial Performance

Pace represents only six percent of the total operating budget of the RTA. Total expenses for Pace in 1985 were approximately $65 million (Exhibit 2-29). Following the service cuts and cost reductions in 1981 and 1982, costs have risen from $39 million in 1982 to $65 million in 1985 as service has been restored. Revenues have increased from a 1982 total of $12 million to $18 million in 1985. As shown on Exhibit 2-29, cost increases are exceeding revenue gains. Non-carrier expenses, including administration, fuel, insurance and parts, have increased 50 percent since 1983 (to $15.5 million in 1985), and currently represent 25.4 percent of Pace costs. Increases in administrative and insurance costs have exceeded reductions in fuel costs.

2.2.3.2 Pace Market and Level of Service Trends

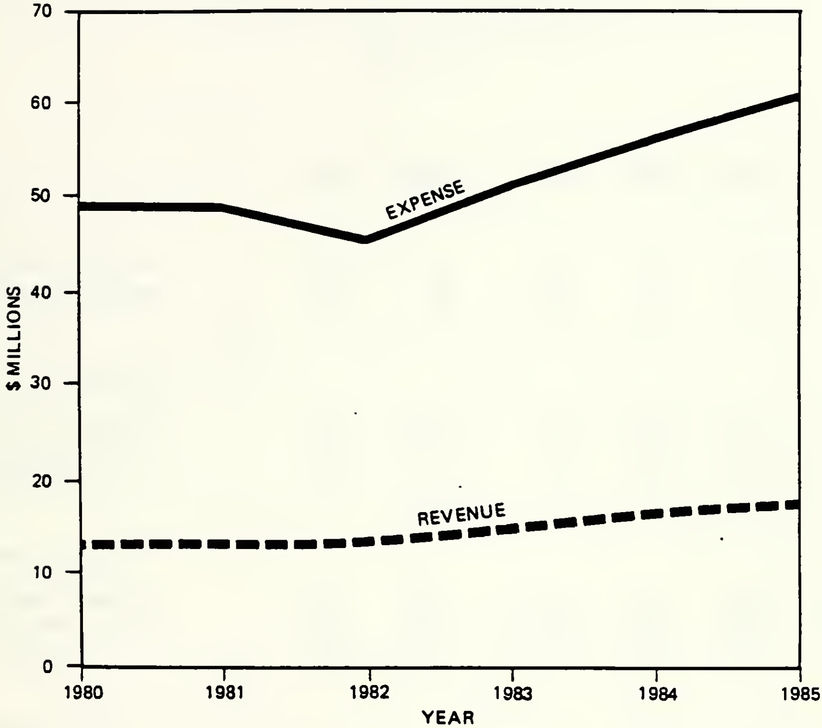
Suburban bus ridership steadily increased throughout the 1970s, spurred at least in part by continuing suburban population shifts. The financial crises in 1981 induced major service cutbacks and fare increases and halted the trend as annual patronage was reduced by one-third. The decline stabilized in 1982, and the ridership trend has since been increasing. Annual ridership increases have been comparable to those of the late 1970s, and 1985 ridership was at an all-time high.

A major impetus of current suburban ridership growth is the migration towards suburbia. Population and employment continue to rise in the Pace service areas. Land use and demographic forecasts support the continuation of this growth through the 1980s, promoting a favorable ridership outlook.

Service and ridership data for the five-year period illustrate the impact of the service losses and fare increases in 1981 and 1982. Ridership dropped 30 percent from 1980 to its low point in 1982 as service was reduced over 24 percent (Exhibit 2-30). Ridership has since rebounded strongly and in 1985 exceeded the 1980 level. Ridership for the funded carriers (including the four carriers owned by Pace and the ten systems funded by Pace) is more than 93 percent of suburban bus patronage.

EXHIBIT 2-29
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Pace Financial Summary
1980 - 1985



PACE FINANCIAL DETAIL ($s in Millions)

	Calendar Year					
	1980	1981	1982	1983	1984	1985
Total System Expenses	$49.5	$48.9	$45.1	$50.8	$56.4	$61.0
System Generated Revenue	$13.8	$13.4	$13.3	$14.5	$16.4	$17.7
Annual Recovery Ratio(1)	27.9%	27.3%	29.5%	28.5%	29.1%	29.0%

(1) System recovery ratio is calculated by dividing revenue by expense

SOURCE: Pace

EXHIBIT 2-30
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Pace Service and Ridership Summary
1980 - 1985

	1980	1981	1982	1983	1984	1985
Fleet						
Funded Carriers	536	602	568	572	569	557
Contract Carriers	N/A	97	101	97	110	111
Paratransit	48	48	72	113	113	113
Vehicle Hours (000s)						
Funded Carriers	1,200	1,080	859	1,042	1,104	1,110
Contract Carriers	107	128	116	106	108	N/A
Paratransit	55	79	81	97	152	176
Vehicle Miles (000s)						
Funded Carriers	20,019	15,185	13,759	15,011	15,926	16,403
Contract Carriers	1,910	2,373	2,209	2,197	2,161	2,519
Paratransit	836	1,204	1,232	1,376	2,941	2,717
Personnel (Funded Carriers Only)	1,075	573	785	874	899	920
Ridership (000s)						
Funded Carriers	34,302	28,387	23,864	28,371	33,500	34,375
Contract Carriers	2,796	2,298	1,894	1,811	1,899	1,846
Paratransit	394	521	575	673	977	1,067

NOTES:

N/A - Not Available

Funded Carriers includes Pace-owned (i.e., Pace-North) and Pace-subsidized (i.e., Nortran)

Contract Carriers includes service providers with service contracts with Pace

Paratransit includes all local paratransit operations regardless of funding arrangemens

This ridership has grown 54 percent since 1982. Contract carriers have increased in number since 1980, but have had fairly constant ridership since 1982. Paratransit ridership has steadily grown since 1980. A 140 percent increase in the number of paratransit operators has produced a 170 percent increase in annual patronage.

2.2.3.3 Pace Cost and Revenue Trends

While costs have risen, passenger levels have also risen and cost per passenger has only marginally increased (Exhibit 2-31). Likewise, cost per mile and revenue per mile performance has been favorable since the 1981 financial crisis (Exhibit 2-32). Costs per mile have actually declined while revenue per mile has slightly increased in each of the past three years. Revenue gains are attributable to growth in ridership not to fare increases.

A comparative review of Pace carriers is provided on Exhibit 2-33. Average operating cost per passenger for the Pace system (i.e, including contract and paratransit service) in 1985 was $1.47 while annualized capital expenditures per passenger was approximately 40¢. Nortran, Pace West and Pace South all exhibit very favorable performance in both capital and operating cost per passenger, while Pace North, Joliet and Wilmette are below the unit cost average. Contract carrier performance is consistent with the Pace system in capital costs, but operating cost per passenger is $2.60, 77 percent higher than average. Paratransit service, as expected, is below the system performance in both operating costs ($4.13) and capital costs ($1.88) per passenger due to the relatively low ridership (special services, door-to-door, etc.) resulting from service provided in less densely populated areas.

2.2.3.4 Status of Pace Physical Assets

Pace's assets total over $150 million and include 524 buses, 153 paratransit vehicles, and 10 garages. The bus fleet, which represents 50 percent of Pace's assets, is relatively old with 54 percent over 10 years old and a fleetwide average age of 9 years (Exhibit 2-34). The life expectancy of these vehicles is 12 years. Paratransit vehicles account for the remainder of Pace's rolling stock and represent only 5 percent of the total asset value. Over one-third of the vehicles are in the expected final year of their operating life (i.e., 4 years); and the average age of the paratransit fleet is 3 years.

Pace owns, operates and maintains 10 garages. The asset value of these facilities is $45 million and represents 30 percent of Pace's total assets. The age distribution shows that half of the garages are approaching their expected life of 40 years (Exhibit 2-34). The remainder of the facilities are relatively new, with an average age of 25 years.

EXHIBIT 2-31
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Pace Per-Passenger Operating Cost Trends
1980 - 1985

EXHIBIT 2-32
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Pace Level of Service Cost and Revenue Trends
1980 - 1985

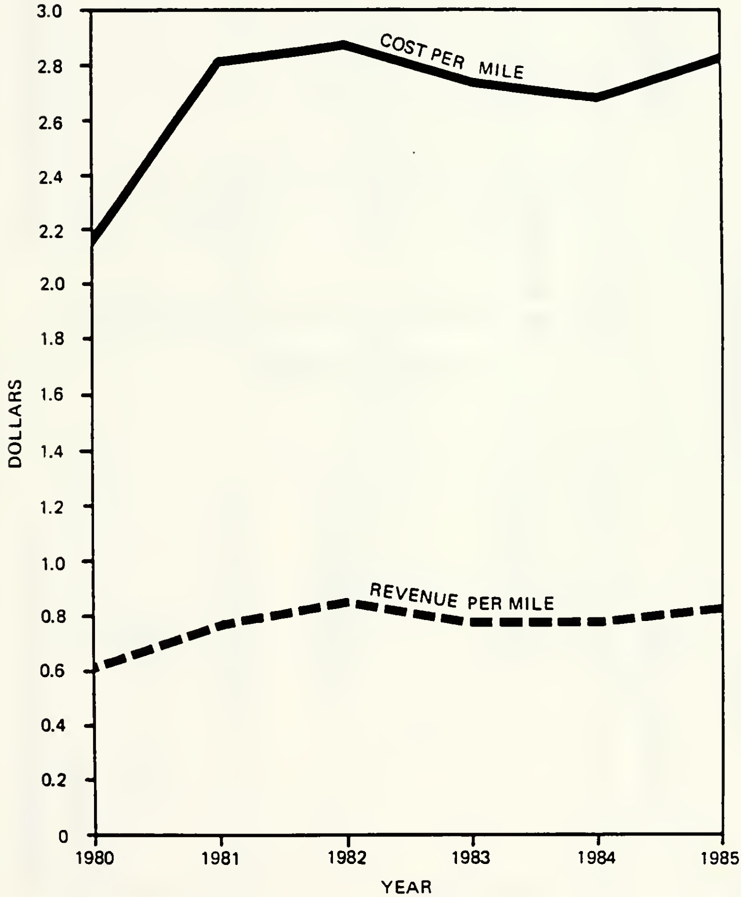
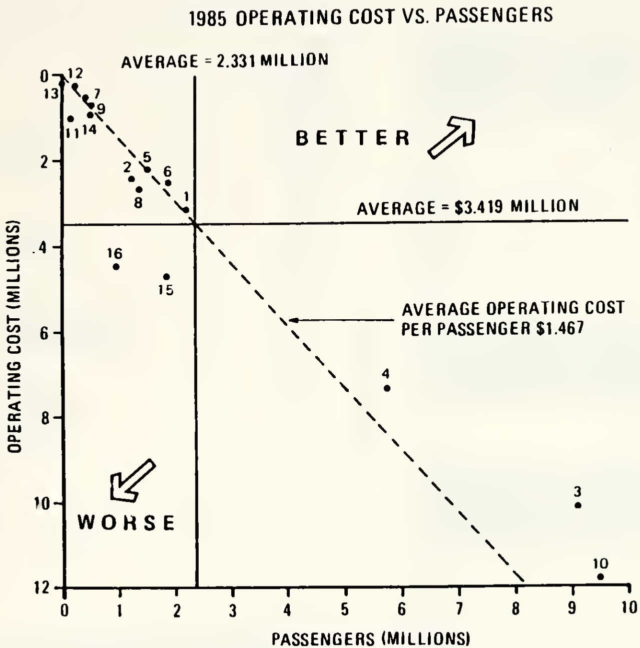
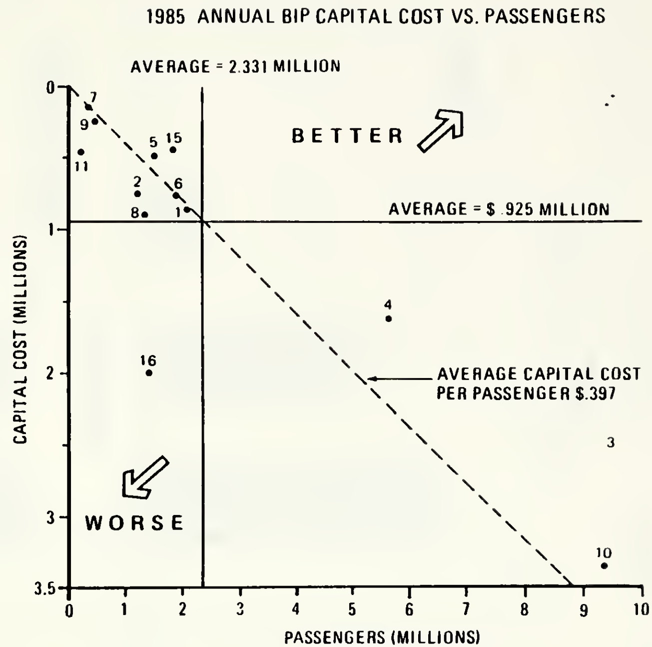


EXHIBIT 2-33
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Operating and Capital Cost Center Comparison
Pace Carriers

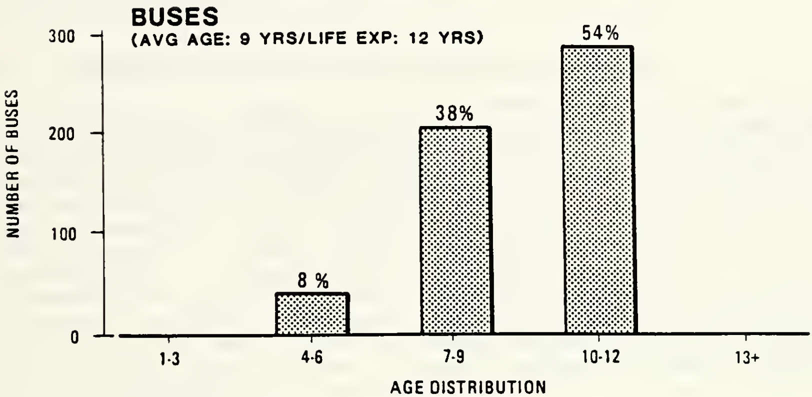


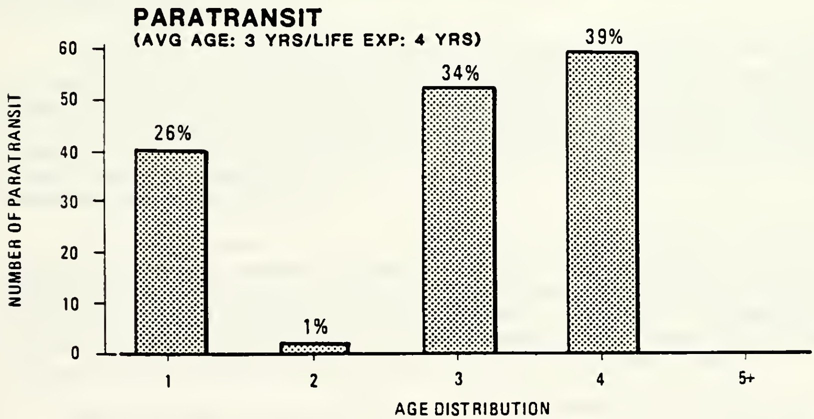


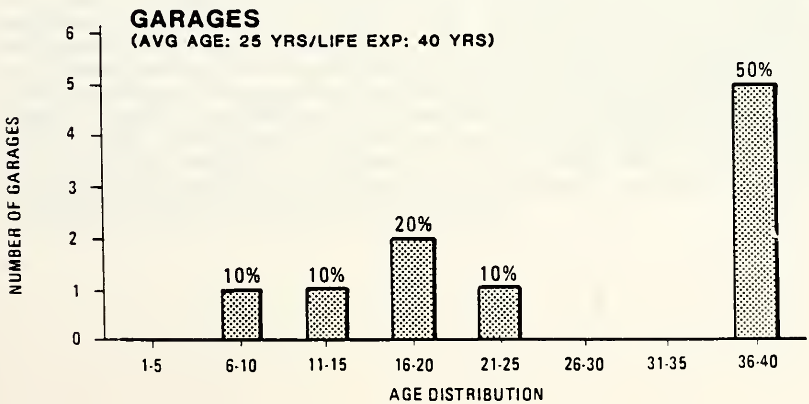
1 = PACE SOUTHWEST
2 = PACE NORTH
3 = PACE WEST
4 = PACE SOUTH
5 = AURORA
6 = ELGIN
7 = HIGHLAND PARK
8 = JOLIET
9 = NILES
10 = NORTRAN
11 = WILMETTE
12 = GLEN ELLYN
13 = MELROSE PARK
14 = NAPERVILLE
15 = CONTRACT CARRIERS
16 = PARATRANSIT

EXHIBIT 2-34
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Pace Asset Age Distribution - 1985
Rolling Stock and Garages







2.3 DEMOGRAPHIC TRENDS AND REGIONAL PUBLIC TRANSPORTATION IMPACTS

Significant national and local trends have changed the nature of urban travel with important impacts on changing public transportation markets.

2.3.1 Chicago and National Population and Employment Trends

Chicago has not escaped the effects of predominant national population and employment trends: suburbanization and general migration to the Sunbelt areas. From 1970 to 1980, the Northeast region lost almost 5 percent of its urban area population and the North Central region gained a modest 0.3 percent, while the South and West region's population increased almost 20 percent (Exhibit 2-35). The U.S. population living in urban areas increased almost 7 percent from 1970 to 1980. Coupled with lower overall urban area population growth was the decentralization of population within these areas: central cities lost almost 5 percent of their 1970 population nationwide, and the suburban areas grew 16 percent. The Chicago urban area mirrored this population decentralization. Between 1970 and 1980, the City of Chicago declined 11 percent in population, while the suburbs increased almost 13 percent to exceed the central city population by over one million people. Overall, the Northeastern Illinois region grew to over seven million people.

According to U.S. Census projections, the pattern of migration to the South and West will continue. Forecasts are for 18 percent growth in U.S. population, to a Year 2000 population of 267 million (Exhibit 2-36). The comparable growth rate for the South and West is 36 percent, to a total of 161 million people — rising from 52 percent to 60 percent of the nation's population in the Year 2000. The North Central Region is expected to exhibit only modest increases to 1990, and a slight decline between 1990 and 2000.

Employment growth in the Chicago region has also slowed as nationwide employment growth exceeded Chicago in every job category (Exhibit 2-37). The Chicago area actually lost employment in the transportation/utility/communication and manufacturing categories during the decade. Metropolitan Chicago has also not kept pace with the nationwide trend of increased service sector employment as a replacement for declines in industrial and manufacturing employment.

While economic forecasters disagree on employment growth rates to the Year 2000, they do foresee a lower growth rate for Illinois and the Chicago region contrasted to the U.S. as a whole. Most forecasters show the Chicago area employment growth rate at between one-half and one-third the national rates; and the national growth rates are generally estimated at less than 2 percent per year. A recent estimate of employment growth in metropolitan areas shows that the highest growth in employment will continue to be focused on the Sun Belt (Exhibit 2-38). The Chicago metropolitan area is ranked third in employment in the Year 2000 (behind Los Angeles and New York) with over 3.6 million employment, but has a modest growth rate of 16 percent compared to the top 30 metropolitan growth areas (averaging 46 percent).

EXHIBIT 2-35
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Urban Area Population Shifts: 1970-1980

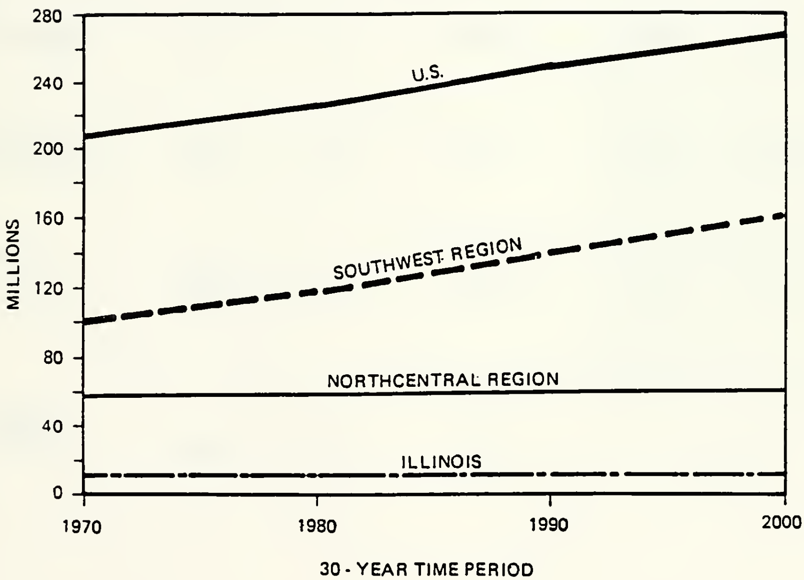
	1980 Population (000s)			Change 1970-1980 (%)		
	Total	Central City	Suburbs	Total	Central City	Suburbs
U.S. Total	102,816	39,639	63,177	+ 6.9	- 4.9	+16.0
Northeast	27,294	11,173	16,120	- 4.9	-12.3	+ 1.0
North Central	24,937	8,764	16,173	+ 0.3	-14.1	+10.5
South	25,388	10,200	15,189	+19.8	+ 2.4	+35.3
West	25,197	9,502	15,695	+17.7	+ 8.1	+24.3
CHICAGO	7,058	2,986(1)	4,071	+ 1.2	-11.4	+12.9

(1) Based on preliminary Census data — final population was 3,005,000.

SOURCE: Chicago Area Transportation Study, Research News, "Regional Demographics and Employment Trends and Transportation Implications," Frank H. Cassell, Volume 23, Number 1, June 1984.

EXHIBIT 2-36
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Nationwide Population Trends
1970 - 2000



SOURCE: U. S. Census

EXHIBIT 2-37
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

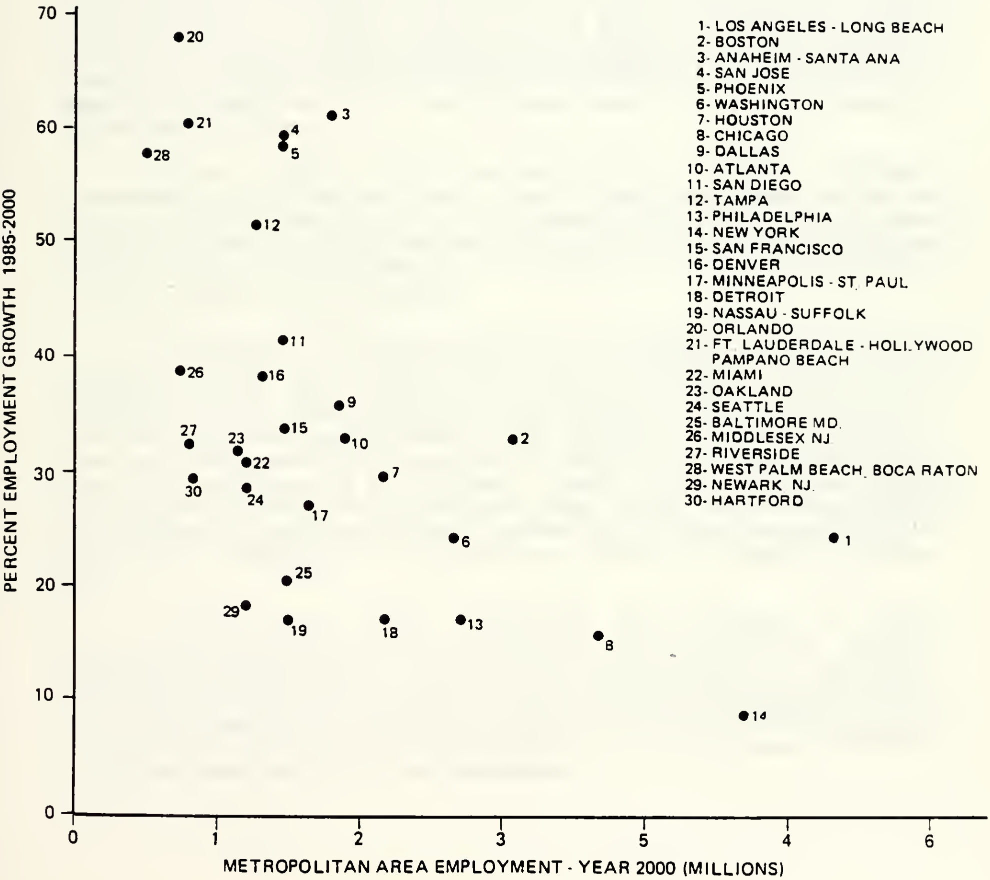
Regional Employment Changes
Census Years 1970-1980
(Millions)

	1970	1980	Percent Change	Regional Share 1970	Regional Share 1980
City of Chicago	1.816	1.573	-13.4%	58.5%	46.1%
Suburban Cook County	0.828	1.119	35.1%	26.7%	32.8%
Collar Counties	0.458	0.719	57.0%	14.8%	21.1%
TOTAL REGION	3.102	3.411	9.9%		

SOURCE: U.S. Census.

EXHIBIT 2-38
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Employment Level and Growth to Year 2000
Metropolitan Statistical Areas with Largest Employment Growth
1985 - 2000 (Top Thirty)



Source: National Planning Association, 1986

This decentralization of both population and employment reduced the concentrated travel market to/from the City of Chicago — the traditional market niche for transit. In addition, the regional dispersion of population and employment to suburban areas has created a market that is difficult for traditional transit modes to serve in an economically efficient manner. Adverse impacts on transit travel have already been manifested.

2.3.2 Trends in the Six-County Region

Within the six-county RTA area, the decentralization of population between 1970 and 1980 was marked by a loss of 360,000 people from the City and a gain of 489,000 in Suburban Cook County and the Collar Counties of DuPage, Kane, Lake, McHenry and Will (Exhibit 2-39). Even with this marked suburban shift, the City still retains over 42 percent of the six-county region's population. Over 3 million people live in the 228 square mile area of the City of Chicago; the remaining 4.1 million live in the 3,446 square miles of Suburban Cook and the Collar Counties. The greater density of residents in Chicago, over 13,000 residents per square mile, compared to only approximately 1,200 residents per square mile in the suburbs, still makes the City a more favorable transit market — particularly for travel within the City.

As shown in Exhibit 2-40, the six-county region has exhibited a decline in manufacturing employment and a rise in service-related employment. Service and trade sector employment share is up to 59 percent in 1985 compared to 49 percent in 1970. The loss of manufacturing jobs in the inner city area and the replacement of these jobs by service and trade jobs in the suburbs is one of the key trends which will impact travel in the RTA region.

As a counterpoint to the overall decline of employment in the City, the employment levels in downtown Chicago have increased from approximately 380,000 to nearly half a million between 1970 and 1980. This growth in employment near areas of high public transit accessibility (particularly commuter rail) has accentuated the importance of high capacity transportation corridors to downtown development. It also highlights the substantial employment losses in the inner city areas outside of the downtown. Overall Chicago employment dropped over 240,000 jobs from 1970 to 1980 which, when coupled with an almost 120,000 job increase for downtown, indicates a severe drop of approximately 360,000 in non-downtown employment — almost 20 percent of the 1970 level of 1.82 million jobs.

The 1980 total regional employment grew modestly to almost three-and-one-half million, but this growth was suburban in orientation (Exhibit 2-41). Employment in suburban communities gained more than half a million jobs, while the City lost almost a quarter of a million jobs. Suburban Cook County total employment exceeded one million with a 35 percent increase, and the Collar Counties have had a 57 percent increase to over 700,000 jobs. By 1980 the suburbs had passed the City in total employment.

EXHIBIT 2-39
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

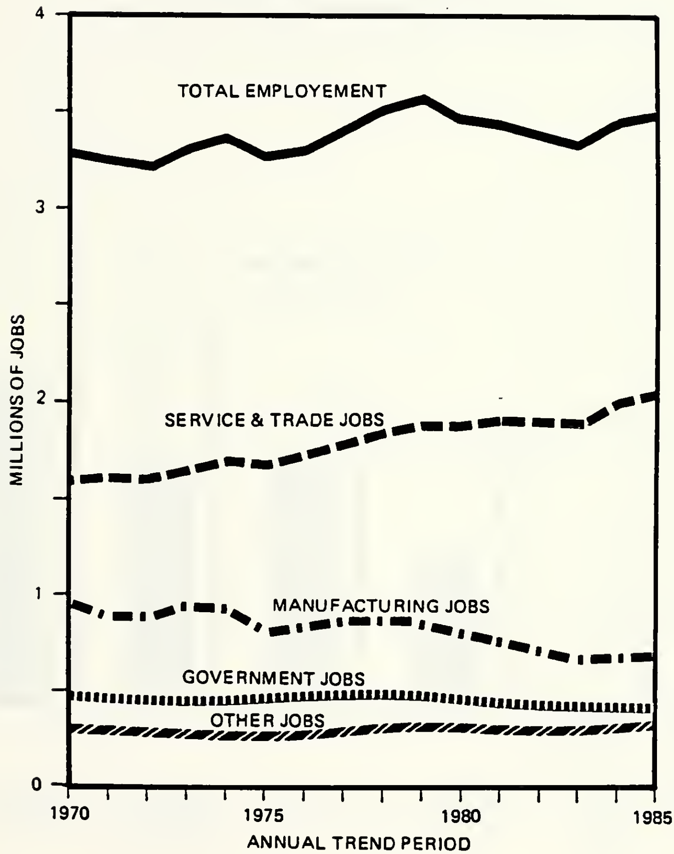
Regional Population Changes
Census Years 1970-1980
(Millions)

	1970	1980	Percent Change	Regional Share 1970	Regional Share 1980
City of Chicago	3.369	3.009	-10.7%	48.3%	42.4%
Suburban Cook County	2.124	2.244	5.6%	30.5	31.6%
Collar Counties	1.481	1.850	24.9%	21.2%	26.0%
TOTAL REGION	6.975	7.103	1.8%		

SOURCE: U.S. Census.

EXHIBIT 2-40
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

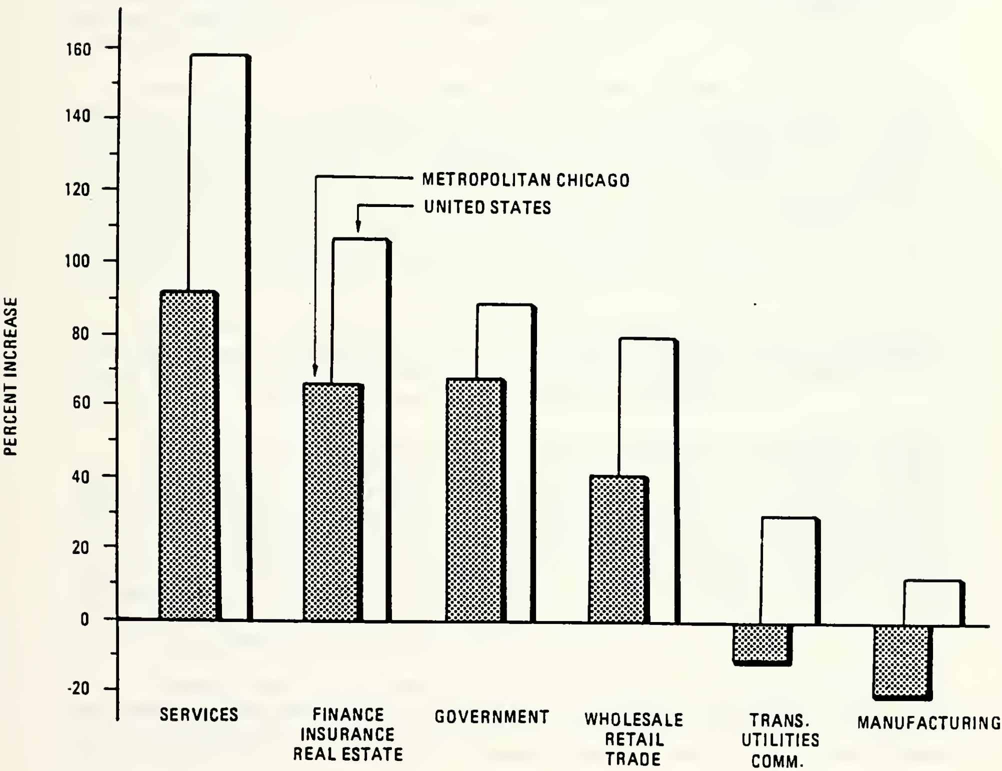
Employment Trend by Job Category
Total Six-County Region
1970 - 1985



Source: National Planning Association

EXHIBIT 2-41
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Comparative Employment Increases
Between 1970 and 1980
Metropolitan Chicago versus United States



SOURCE: U. S. Census

2.3.3 Changing Transit Ridership Patterns

The dispersion of population and employment and increased automobile ownership between 1970 and 1980 resulted in a drop in journey-to-work transit travel, despite an increase in regionwide work trips (Exhibit 2-42). The total work trip market increased by 340,000 daily trips, but transit usage decreased by 74,000 trips, resulting in a market share reduction from 23 percent to 18 percent. Journey-to-work travel from the City of Chicago to all destinations declined 11 percent to 1.19 million trips between 1970 and 1980. Transit travel also declined both in share (38 percent to 32 percent) and absolute volume (481,000 to 381,000). Suburban Cook work trips by transit increased more than 13,000 but still lost half a market share point (12.5 percent to 12 percent) in a total work trip market that grew 16 percent to almost 1.1 million trips. The Collar County work trip market had the greatest percentage growth from 1970 to 1980 — 45 percent to almost 0.9 million trips. While transit travel increased almost 28 percent, it did not keep pace with overall market growth and its market shares declined from 7.5 percent to 6.6 percent.

Work trips to the Loop area of downtown Chicago continue to be an important market for transit service — for all trip origins (Exhibit 2-43). Transit captures 74 percent of the work trip market for these loop-oriented work trips. The transit market shares vary only slightly by area of work trip origin: 73 percent for suburban Cook County, to 75 percent for other City of Chicago, and 74/percent for the Collar Counties. The downtown Chicago travel market will continue to be a strong transit market. Even though the demographic trends indicate continued dispersion in population and employment, the growth in central area employment has been an important factor in maintaining transit travel volumes.

The Chicago Department of Public Works annual cordon count surveys of the downtown loop area, provides an additional, historic perspective of the downtown travel market. From 1960 to 1984, total travel has averaged 692,000 people with a high in 1967 of 762,000 and a low in 1975 of 620,500 (Exhibit 2-44).

The market share by mode depicts a slowly declining subway/elevated market share, bus holding fairly constant, and commuter rail and the automobile trading gains and losses between each other. This market has remained relatively constant over the last 25 years with transit capturing approximately 68 percent of the market. The declining trend of rapid rail travel reflects the general residential dispersion of non-downtown Chicago residents and a trend towards reduced journey-to-work travel by Chicago residents to downtown Chicago. The commuter railroads and the automobile have been competing for the longer distance suburb-to-Chicago travel market to the loop area.

Ridership declined significantly from 1980 to 1982 due to a combination of a depressed regional economy and both increased fares and reduced service levels in response to the financial problems in those years. Since the low point in 1982 and 1983, there has been a generally upward trend for the three Service Boards

EXHIBIT 2-42
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Regional Mode Choice by Residential Area
Census Journey-to-Work Trends
1970 - 1980

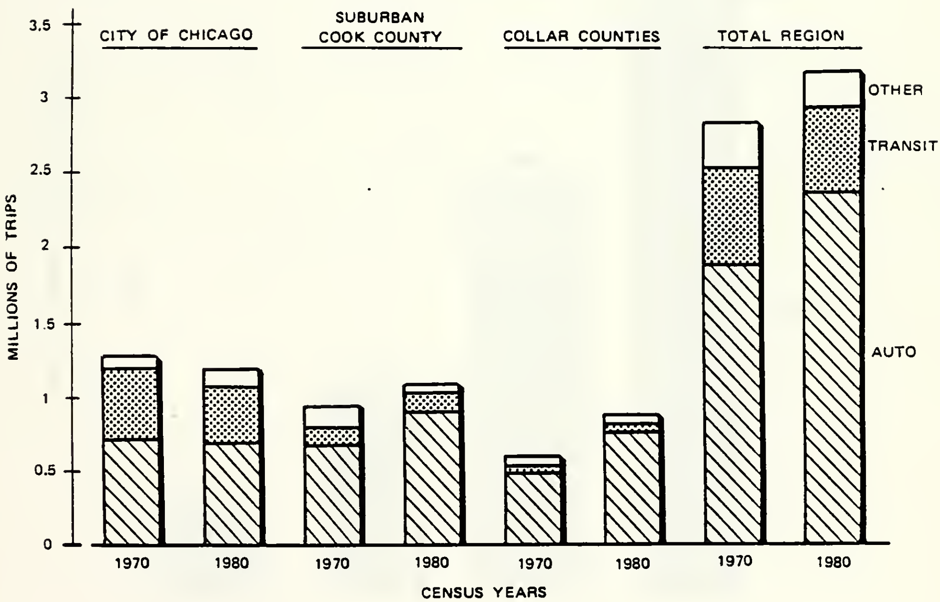
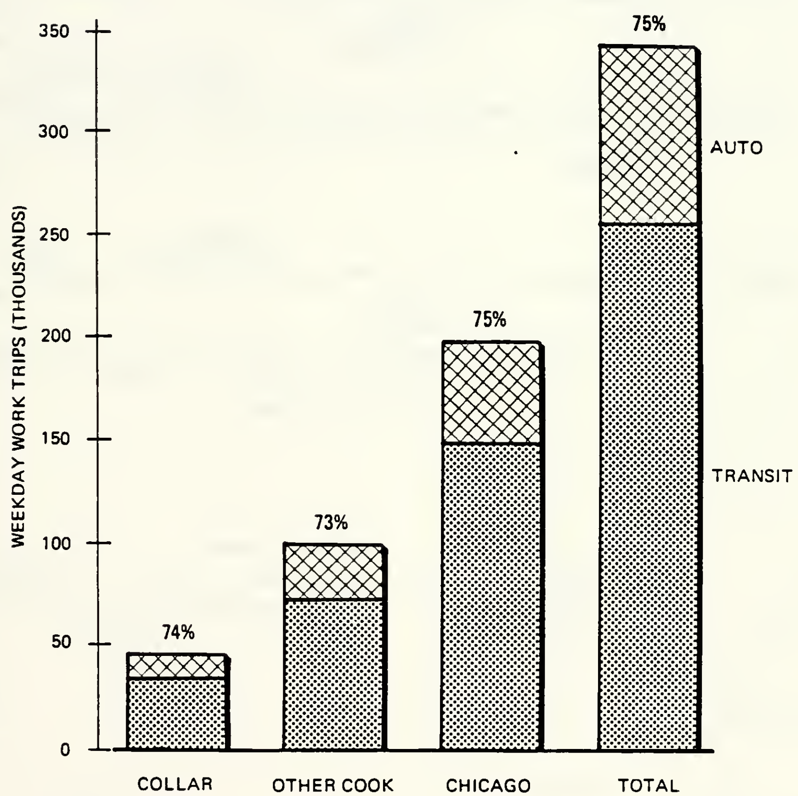


EXHIBIT 2-43
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

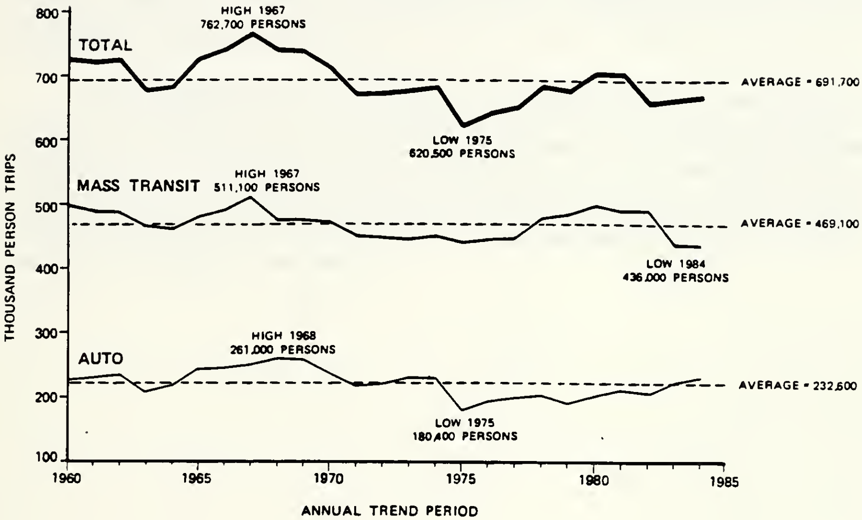
Work Trip Travel to Loop and Transit Market Share
1980 Journey-to-Work Trips

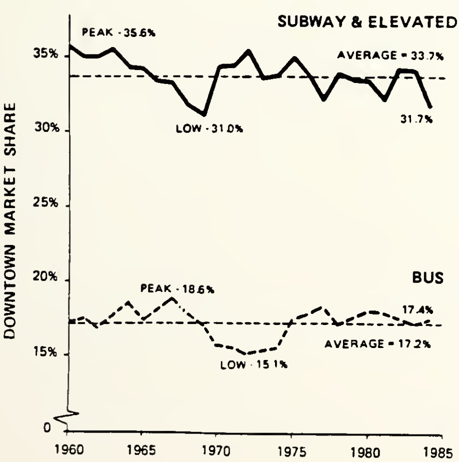


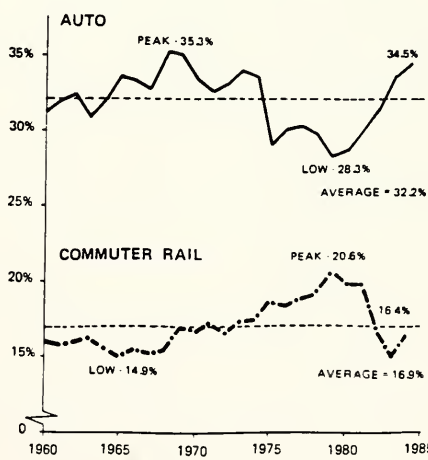
Source: US Census

EXHIBIT 2-44
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Downtown Cordon Market Trends
1980 - 1985







(Exhibit 2-45). The CTA has demonstrated a positive trend in recovery from a low of 615 million passenger trips annually (1983). CTA regained 30 percent of its 1979-1983 loss in ridership, to 644 million trips in 1985, but still remains below the 1979 high of 712 million passengers. Metra ridership has also grown after significant losses in the 1981-1983 period. Increases of 4.9 percent in 1984 and 3.9 percent in 1985 have raised passenger levels to 64.5 million annually. Pace ridership levels reached an all-time high in 1985 as 38.4 million trips were provided. Prompted by increased suburbanization throughout the regon during the 1970s, ridership grew to the previous high of 38.2 in 1980 until the financial crisis induced service cuts in 1981. Ridership has rebounded strongly since 1982, growing more than 40 percent in four years.

The decentralization of the regional economy and work travel has resulted in increases for long-distance commuter travel to the City from suburban counties — a market in which transit has a continuing advantage. Since reverse (or off-peak) direction travel markets have also grown, including travel from the City to DuPage County and inner suburban areas, the challenge for the three Service Boards and the RTA will be to maintain market share in the downtown-oriented travel market, increase market share in reverse direction markets and develop market share in the suburban-to-suburban travel market.

EXHIBIT 2-45
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Ridership Profile
Unlinked Passenger Trips
(Millions)

	Service				
	CTA	Commuter Rail	Suburban Bus	Total	Percent Change
1976	673.1	67.2	21.7	762.0	—
1977	681.8	68.6	24.1	774.5	1.6%
1978	696.3	72.5	28.1	796.9	2.9%
1979	711.6	79.5	35.4	826.5	3.7%
1980	696.6	81.9	38.2	816.7	-1.2%
1981	643.3	70.4	27.4	741.1	-9.3%
1982	616.1	60.5	27.7	704.3	-5.0%
1983	614.6	59.2	31.2	705.0	0.1%
1984	638.2	62.1	36.1	736.4	4.5%
1985	644.4	64.5	38.4	747.3	1.5%

SOURCE: RTA.

3. FUTURE FOR PUBLIC TRANSPORTATION SERVICES

3. FUTURE FOR PUBLIC TRANSPORTATION SERVICES

The future for public transportation services is based to a great extent on external circumstances. Population and employment shifts have implications with respect to traditional and changing markets for transit service. The availability, level and distribution of external funding in both capital and operating categories are particularly relevant to the RTA's posture for improvement and change. In this chapter, these major factors are reviewed from several viewpoints, one for each section:

- Section 3.1: Demographic Patterns - Exploring shifts in population and employment using a range of optimistic and pessimistic estimates to specify changes in locations of people and jobs as a means of identifying market shifts and their impacts on transit service;

- Section 3.2: Markets and Future Regional Development - Examining the results of changing levels of service in conjunction with demographic changes to explore the implications for ridership;

- Section 3.3: Capital Funding Needs - Evaluating the financial needs and sources to support the existing transit infrastructure with consideration of possible options to alleviate the capital shortfall;

- Section 3.4: Operating Funding Needs - Looking at the source and level of external or non-farebox revenue and the implications of changing levels of funding and current distributional formula on the RTA as a whole and the individual Service Boards;

The combined impacts of demographic patterns, alternative service levels and external funding levels are examined in Section 3.5: Summary of Possible Futures. Demographic patterns and funding levels are comgined and formulated as pessimistic, neutral and optimistic scenarios, and the financial impacts of these scenarios explained.

The results of these impact analyses are summarized in Section 3.6: Threats and Opportunities. This section defines the major challenges facing the RTA and Service Boards.

Finally, a range of conceptual approaches or possible strategies are posed in Section 3.7: Generic Strategic Concepts. A consideration of these options leads to the long-range strategies and investment plans described in Chapter 4.

3.1 DEMOGRAPHIC SCENARIOS

Like many older cities, the Chicago Metropolitan Area is in the midst of a changing economy — from a heavy industrial orientation to a high technology and service employment base. This changeover is occurring concurrently with a general decentralization of population and jobs in the region. Estimates by sub-area of the region analyzing the effects of the changing demographics in the future produced two alternate scenarios (Exhibit 3-1):

- Optimistic Scenario - Defining a transition into a service economy with manufacturing at current levels and service employment increasing, some acceleration of population growth, continuation of regional employment growth and reversal of the decline of City population and employment. Overall continued relatively strong growth for the region with concentrated growth in housing and economic activity in developing suburban areas, and some reinvestment in older parts of the region. In this scenario, population for the region as a whole is expected to grow from 1980 levels of 7.1 million to 8.5 million by the Year 2015. Employment levels will grow from 3.41 million in 1980 to 4.36 million in the Year 2015.

- Pessimistic Scenario - Defining a continuation of past trends marked by further decline in the manufacturing industries and a slower transiton to a service economy; population growth levels would be maintained, while regional employment growth would be slower. A rapid decentralization of employment will occur, and population and development will continue to shift from Chicago to the suburbs. Overall population increase is projected at 7.79 million — up almost 700,000 from 1980, while employment grows by 220,000 to 3.63 million in the Year 2015.

3.1.1 Population and Employment Forecasts

The demographic outlooks for both the optimistic and pessimistic scenarios were investigated at a more disaggregate level to identify market shifts. The map on Exhibit 3-2 illustrates a fifteen zone breakdown of the region, linking the following demographic discussion with the travel market forecasts described later in this chapter.

EXHIBIT 3-1
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

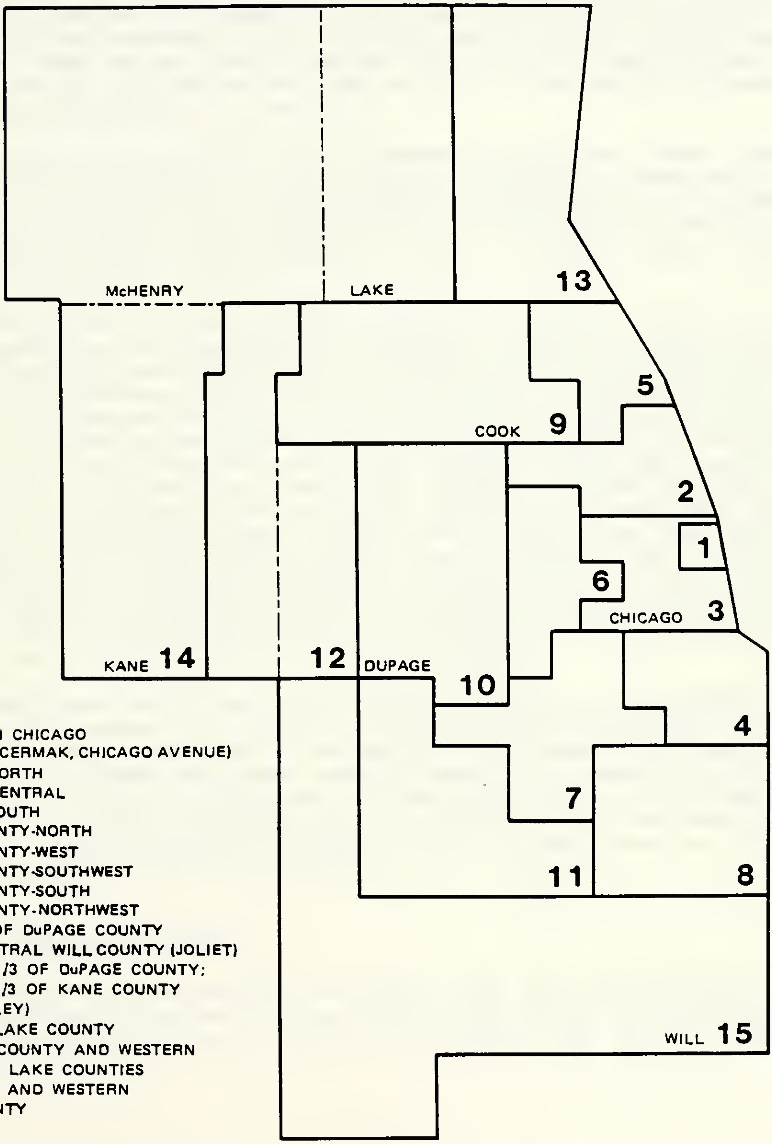
Population and Employment Growth Patterns
Optimistic and Pessimistic Scenarios

	1980	1995		2005		2015	
		OPT	PESS	OPT	PESS	OPT	PESS
Population							
Chicago	3.01	2.95	2.81	3.00	2.82	3.15	2.93
Suburban Cook	2.24	2.41	2.33	2.43	2.31	2.42	2.24
Subtotal - Cook	5.25	5.36	5.14	5.43	5.13	5.57	5.17
Collar Counties	1.85	2.35	2.21	2.65	2.42	2.93	2.62
TOTAL	7.10	7.71	7.35	8.08	7.55	8.50	7.79
Employment							
Chicago	1.57	1.59	1.48	1.67	1.42	1.69	1.37
Suburban Cook	1.12	1.22	1.10	1.33	1.08	1.41	1.06
Subtotal - Cook	2.69	2.81	2.58	3.00	2.50	3.10	2.43
Collar Counties	0.72	0.91	0.92	1.09	1.07	1.26	1.20
TOTAL	3.41	3.72	3.50	4.09	3.57	4.36	3.63

EXHIBIT 3-2

RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Regional Analysis Zones



1. DOWNTOWN CHICAGO (HALSTED, CERMAK, CHICAGO AVENUE)
2. CHICAGO-NORTH
3. CHICAGO-CENTRAL
4. CHICAGO-SOUTH
5. COOK COUNTY-NORTH
6. COOK COUNTY-WEST
7. COOK COUNTY-SOUTHWEST
8. COOK COUNTY-SOUTH
9. COOK COUNTY-NORTHWEST
10. EAST 2/3 OF DuPAGE COUNTY
11. NORTHCENTRAL WILL COUNTY (JOLIET)
12. WESTERN 1/3 OF DuPAGE COUNTY; EASTERN 1/3 OF KANE COUNTY (FOX VALLEY)
13. EASTERN LAKE COUNTY
14. McHENRY COUNTY AND WESTERN KANE AND LAKE COUNTIES
15. SOUTHERN AND WESTERN WILL COUNTY

The optimistic scenario forecasts population growth across the entire region, with a net expansion of 1.4 million residents and nearly 1.0 million jobs by the Year 2015 (Exhibit 3-3). The highest population growth areas include DuPage County, Northwest Cook County, Fox Valley, and Lake County. Both southern and northern Will County (i.e., Joliet area) will also experience strong growth. Within the region, the older portions (Chicago, North Suburban Cook and West Suburban Cook) continue modest household growth through 2015, stable population and employment growth at rates less than regional averages. The City of Chicago continues to decline modestly until 1995, and then resumes growth. Within the City, the central area grows significantly to the Year 2015.

Optimistic employment growth projections closely follow recent trends (Exhibit 3-4). Manufacturing employment increases slightly in the North and West Suburban Cook areas. The most rapid and significant growth is shown in Northwest Suburban Cook and Eastern Du Page Counties, the Fox Valley area and the exurban balance of the region. Overall employment increases to almost 4.4 million by 2015 — a 27 percent regional increase.

The pessimistic scenario results are based primarily on the National Plan Association's Year 2000 population and employment projections which represent one of the more pessimistic independent forecasts for the Chicago region. It results in a more decentralized growth pattern, shifting travel demand away from the City and suburban Cook and into the Collar Counties. Chicago and suburban Cook will continue present trends of decline over the next ten years and then remain fairly constant for the duration of the forecast period (2015). The Collar Counties and Northwest Cook County will contribute the only real gain in population and employment in the region. This scenario, while "pessimistic," does represent a continuation of current trends toward a decline in the Cook/Chicago communities and a strong development of the Collar County areas. Overall regional population under this scenario will increase 700,000 from 1980 to 2015 (Exhibit 3-5). While DuPage, Will, Kane and McHenry Counties all realize strong growth, only the northwestern area of Cook County is expected to grow while overall Cook County population will decline almost 200,000.

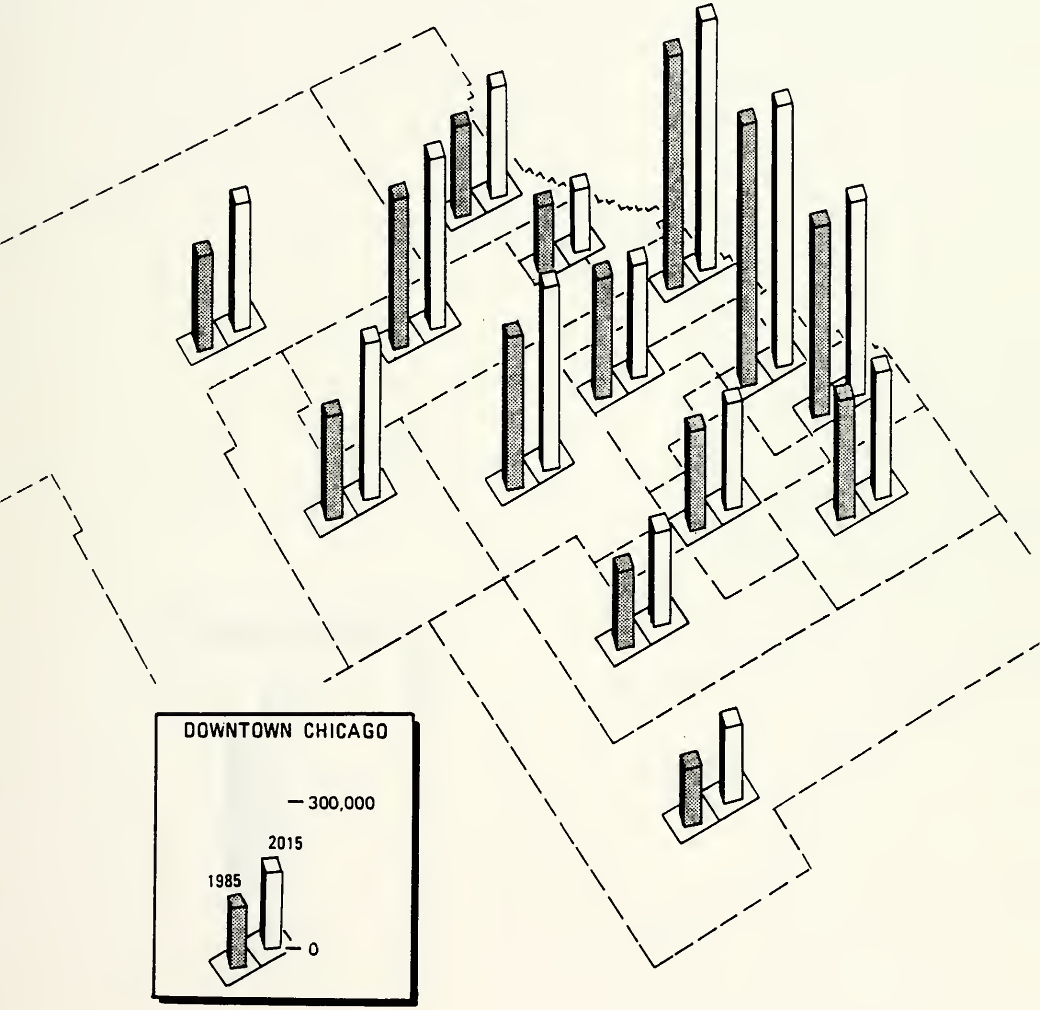
Employment under the pessimistic scenario shows growth of only 220,000 jobs (6.5 percent) between 1980 and 2015. Although service/retail employment will grow at a pace similar to that for the optimistic employment outlook, continued loss of manufacturing employment under the pessimistic scenario will result in lower total job growth. Employment in Chicago and Cook County will drop by 234,000 jobs in spite of employment growth (60,000 jobs) in Northwest Cook County. DuPage County shows a very positive growth outlook (Exhibit 3-6) — even under the pessimistic employment forecast.

3.1.2 Implications for Transit

Estimates of morning peak work transit trips under the optimistic and pessimistic demographic scenarios (assuming the basic transit network does not change) reveal a wide range of possible total ridership values with the Chicago

EXHIBIT 3-3
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

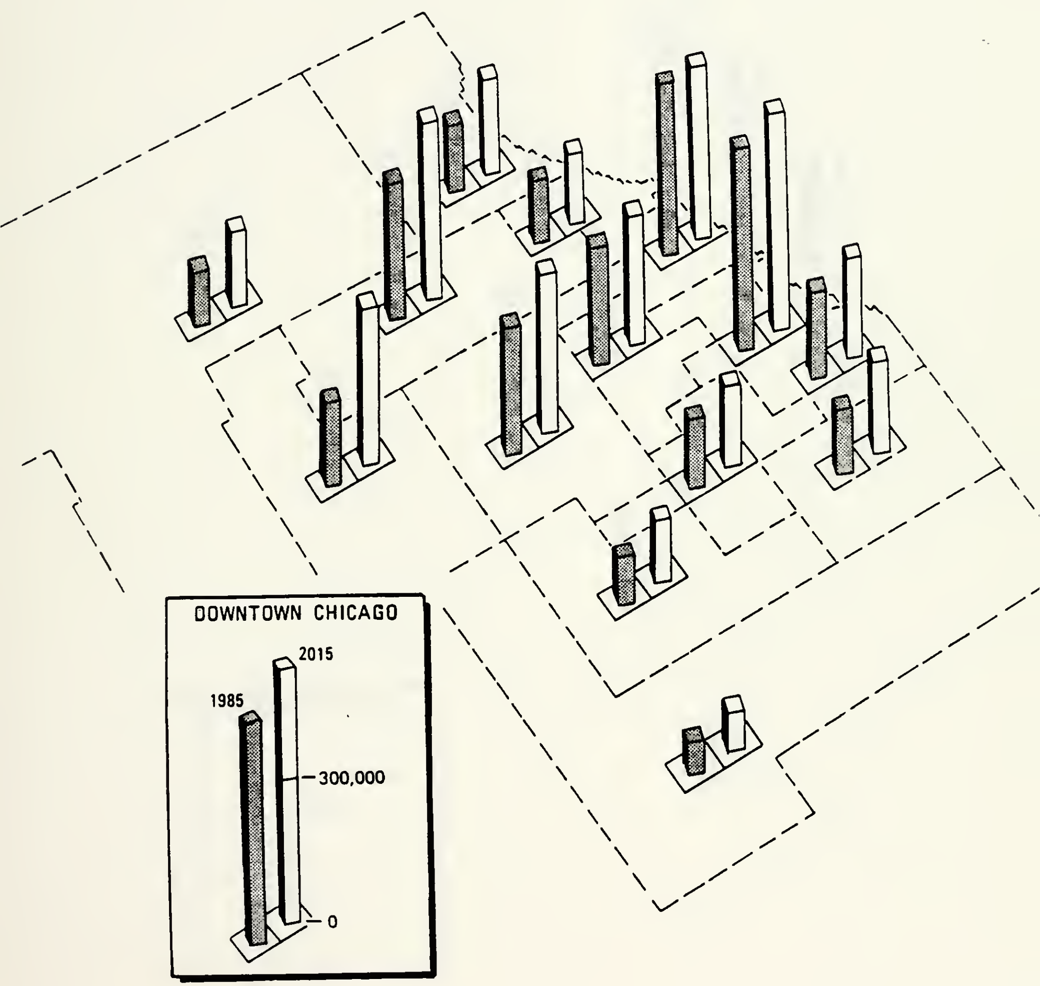
Regional Year 2015 Population Forecast - Optimistic



Source: CATS Analysis of NIPC Forecasts

EXHIBIT 3-4
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

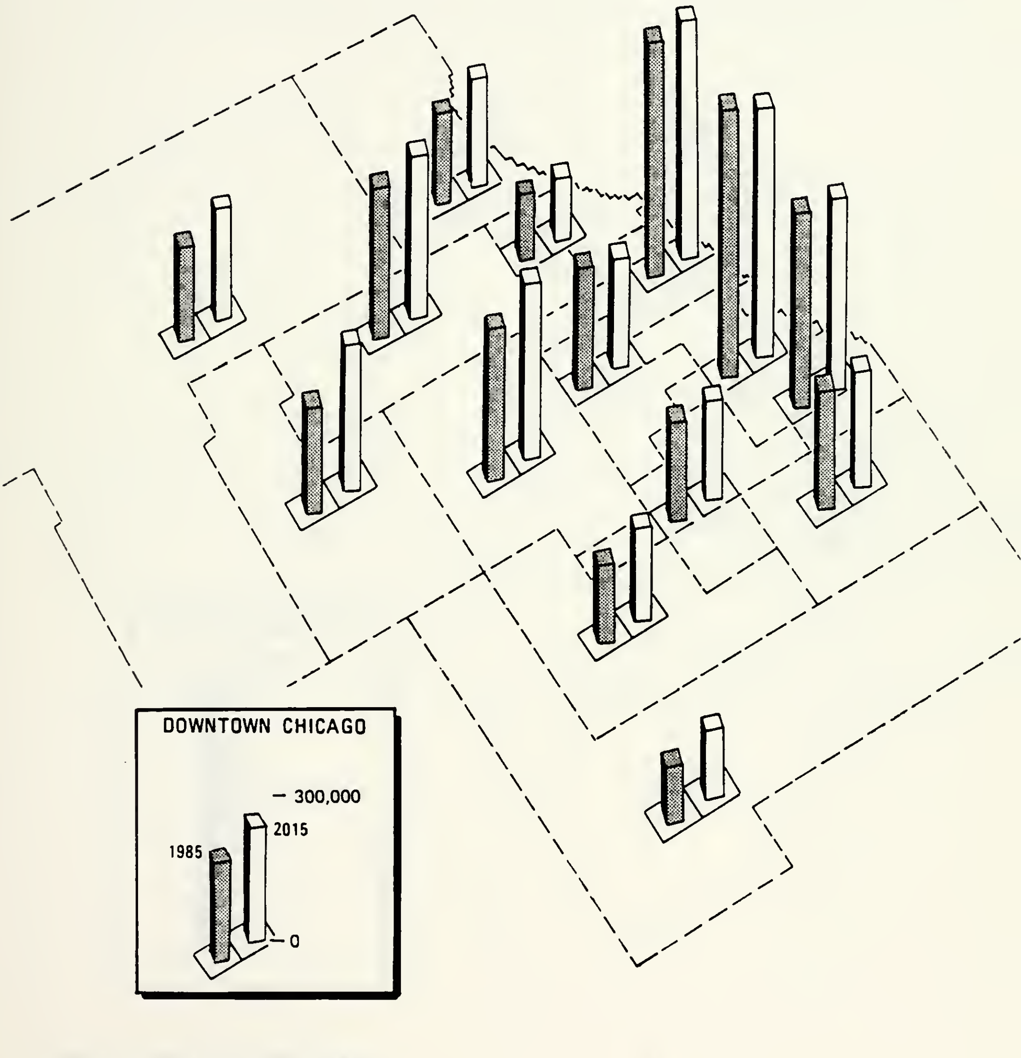
Regional Year 2015 Employment Forecast - Optimistic



Source: CATS Analysis of NIPC Forecasts

EXHIBIT 3-5
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

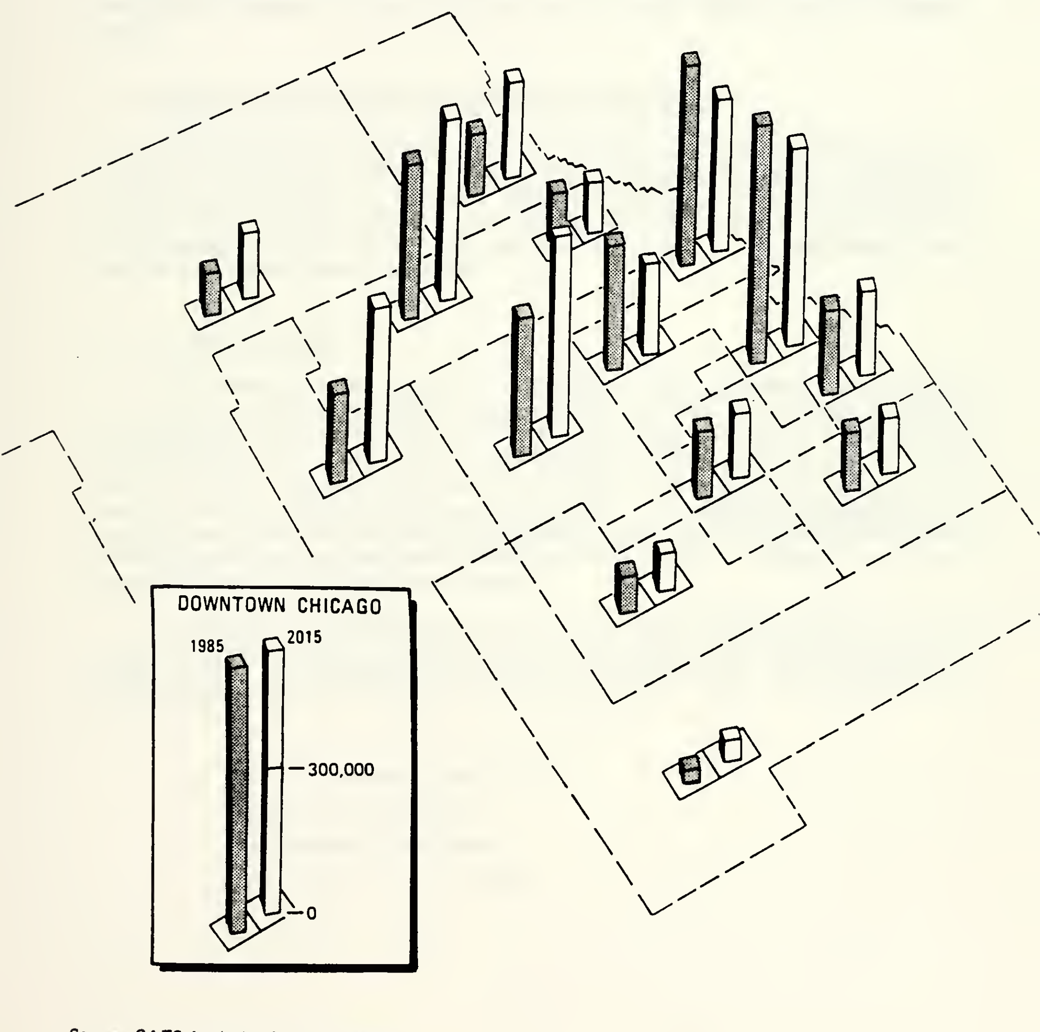
Regional Year 2015 Population Forecast - Pessimistic



Source: CATS Analysis of NIPC Forecasts

EXHIBIT 3-6
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Regional Year 2015 Employment Forecast - Pessimistic



Source: CATS Analysis of NIPC Forecasts

CBD remaining as the destination for the majority of trips (Exhibit 3-7). Total A.M. peak work transit trips forecast for the optimistic scenario were 25 percent higher than 1985, while the pessimistic forecast developed a 14 percent decline in transit travel. The optimistic scenario produced less than 2 percent increase from 1985 to 1995 with the majority of growth occurring in the 1995-2015 period. In 1985, 54 percent of work morning peak trips were destined for the Chicago CBD. Under both scenarios for all the forecast years, the CBD remains the destination for 52 percent (2015 optimistic) to 56 percent (2015 pessimistic) of total transit trips. Under the optimistic scenario, 57 percent of the "new" trips are in non-CBD markets; conversely, under the pessimistic scenario, the down-side risk occurs in non-CBD markets with 60 percent of the loss in this category. This indicates that the optimistic scenarios result in higher non-CBD and/or reverse commute transit travel.

3.2 MARKETS AND FUTURE REGIONAL DEVELOPMENT

The two future demographic scenarios — optimistic and pessimistic — were utilized to forecast patterns of future travel demand in the region. This travel demand was estimated for the 1985 existing conditions and then projected for Years 1995, 2005, and 2015. The presentation of this analysis focuses on travel market segment shifts between 1985 and the Year 2015 as the long-range horizon year for examining market strategies.

3.2.1 Modeling Process

The modeling system applied in this analysis was developed by the Chicago Area Transportation Study (CATS) in association with the University of Illinois at Champaign-Urbana and applied by CATS using regional travel inventory and socioeconomic data. The model projects the morning peak period work trip travel for the entire region based on the selected demographic scenarios and characteristics of highway and transit networks. The model is structured as a simultaneous residential location (distribution), mode choice and assignment model which is sensitive to the travel time (including highway congestion) and cost characteristics of both highway and transit.

The region was divided into 278 zones for the detailed model runs. The analysis results were then summarized into 15 districts grouped together based on similar service and demographic characteristics (Exhibit 3-8). Also highlighted on the regional map are four market area boundaries:

- Central Business District (CBD)
- Balance of Chicago (City)
- Inner Suburban Area (Inner)
- Outer Suburban Area (Outer).

EXHIBIT 3-7
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

CATS Transit Trips Forecast
Bedrock Network

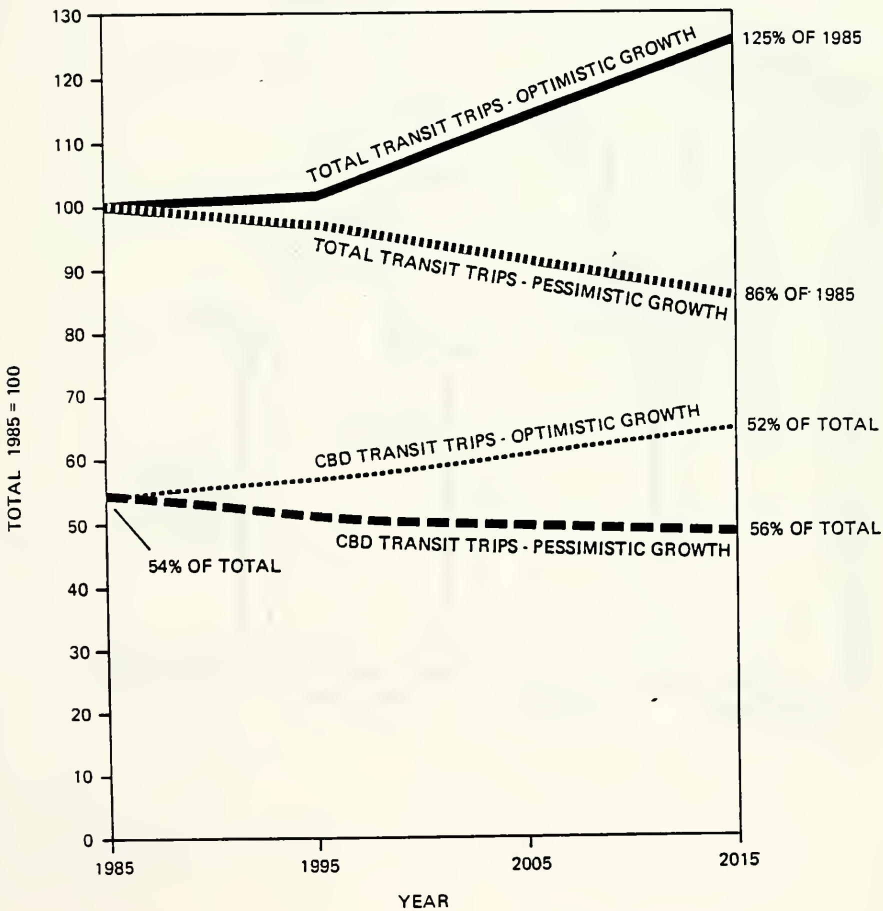


EXHIBIT 3-19
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Annual Capital Requirements by Decade
Bedrock Plan Compared to "Stretch" Plan
(Millions of 1985 Dollars)

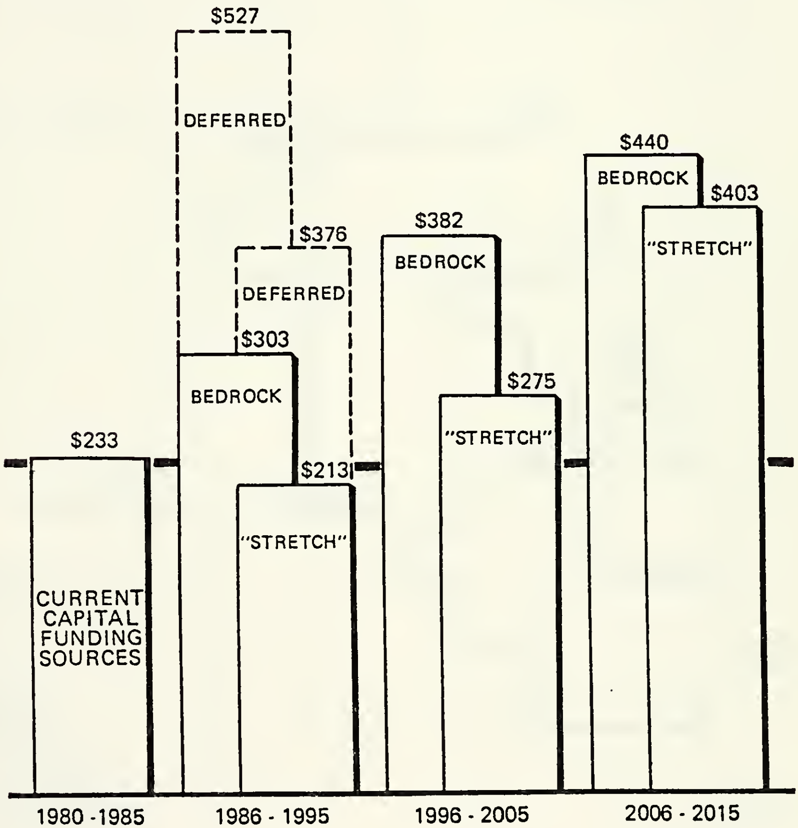
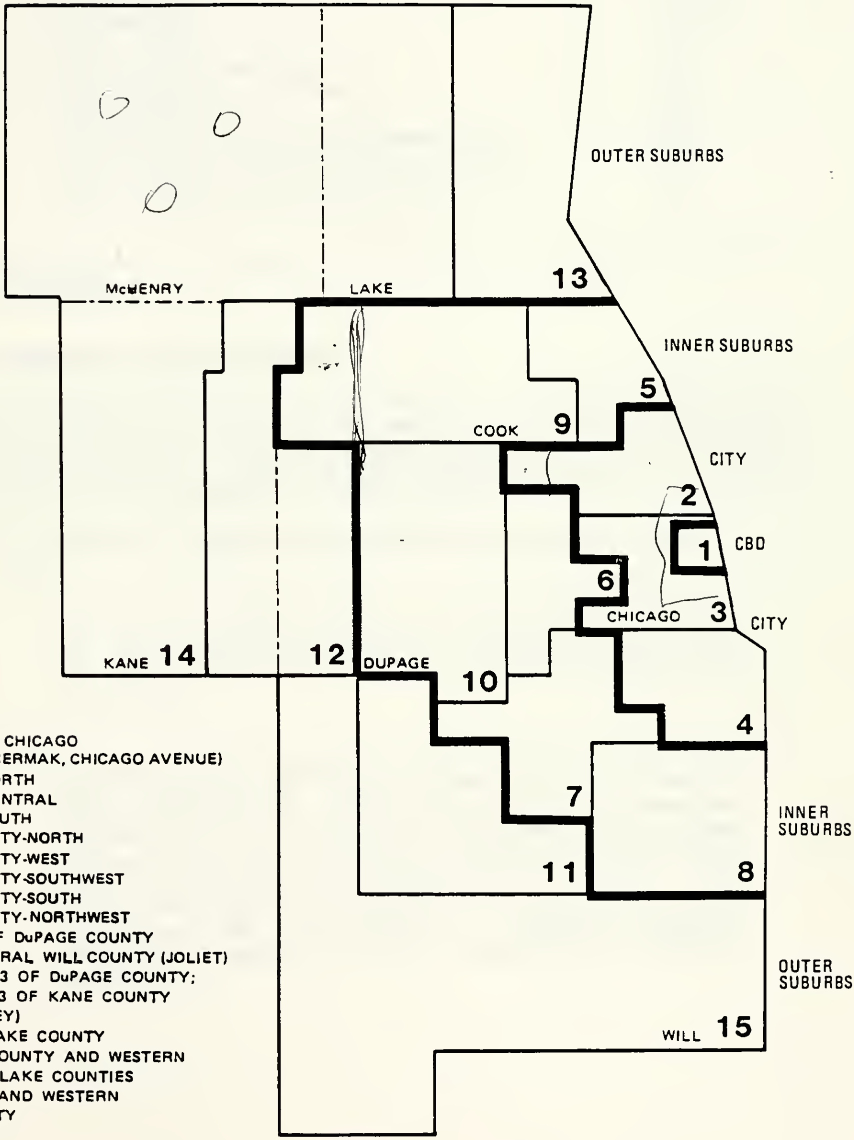


EXHIBIT 3-8
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Analysis Zones and Travel Market Groupings



1. DOWNTOWN CHICAGO (HALSTED, CERMAK, CHICAGO AVENUE)
2. CHICAGO-NORTH
3. CHICAGO-CENTRAL
4. CHICAGO-SOUTH
5. COOK COUNTY-NORTH
6. COOK COUNTY-WEST
7. COOK COUNTY-SOUTHWEST
8. COOK COUNTY-SOUTH
9. COOK COUNTY-NORTHWEST
10. EAST 2/3 OF DuPAGE COUNTY
11. NORTHCENTRAL WILL COUNTY (JOLIET)
12. WESTERN 1/3 OF DuPAGE COUNTY; EASTERN 1/3 OF KANE COUNTY (FOX VALLEY)
13. EASTERN LAKE COUNTY
14. McHENRY COUNTY AND WESTERN KANE AND LAKE COUNTIES
15. SOUTHERN AND WESTERN WILL COUNTY

These four market areas were then grouped into market segments to correspond with overall travel patterns comprised of trips between:

.	Outer Suburban Area and CBD	(O-CBD)
.	Inner Suburban Area and CBD	(I-CBD)
.	City and CBD	(C-CBD)
.	CBD and CBD	
.	Outer Suburban Area and City	(O-C)
.	Inner Suburban Area and City	(I-C)
.	City and City	(C-C)
.	Outer Suburban Area and Inner Suburban Area	(O-I)
.	Inner Suburban Area and Inner Suburban Area	(I-I)
.	Outer Suburban Area and Outer Suburban Area	(O-O)

Projected changes in travel market size and market share were then analyzed for various scenarios.

3.2.2 Description of Network Concepts

Highway and transit networks were defined to project future travel by both modes. The highway network used in this analysis represents the most likely street and highway system which will be operational in the Years 1995, 2005, and 2015. The system includes minor facility additions, mostly in the suburbs, plus selected expansions of existing highway and arterial facilities.

For sensitivity testing purposes, three transit networks were defined:

- **Bedrock Prime**, which represents the existing transit facilities in the region, plus the addition of the committed projects such as the Howard/Dan Ryan Connection and the Southwest Rapid Transit Line;

- **Expansion**, which includes the bedrock prime network plus additional rail and bus transit facilities mostly in the suburban areas, including three circumferential light rail or express bus services (Midway to O'Hare and North; Lemont to Schaumberg and Lake Cook Road; and Indiana to Lake Michigan via Joliet, Aurora, Geneva West Chicago, Elgin and Barrington — Fox Valley), limited network extensions, the conversion of the ICG local to rapid rail, the development of a downtown distributor service, and expansion of selected circumferential fixed-route service; and

- Retrenchment, which represents a reduction from the bedrock prime network in rail services throughout the region including, for analysis purposes, truncating service on four commuter rail lines, the elimination of service on one commuter rail line, and the elimination of two rapid transit lines.

3.2.3 Future Travel Market Analysis

Four future scenarios were analyzed based on the following demographic forecasts and transit networks:

- Optimistic Demographics/Bedrock Transit Network,
- Optimistic Demographics/Expansion Transit Network,
- Pessimistic Demographics/Bedrock Transit Network, and
- Pessimistic Demographics/Retrenchment Transit Network.

These four future scenarios were modeled for the Year 2015 and selected intermediate years resulting in projections of regional travel via the highway and transit networks.

Overall results of the future travel market analysis indicate that total transit volumes increase over 1985 levels in both optimistic scenarios, but decline in both pessimistic scenarios (Exhibit 3-9). However, transit market share declines when compared to 1985 for all combinations except for the optimistic demographics and the expansion transit network. This is an indication that the existing network may not sufficiently fit the future travel needs of the region regardless of population and employment growth forecasts.

The presentation of the results is graphically illustrated in Exhibits 3-10 and 3-11 by plotting the projected (2015) transit market share for each market segment against the growth rate of total travel between 1985 and the horizon Year 2015.

These graphs provide valuable insight into the characteristics of each travel market segment. These characteristics include:

- Growth Rate - Market segments that are projected to grow rapidly from 1985 to 2015 are represented by points on the upper portion of the chart;
- Market Size - Market segments that are projected to be major travel markets in terms of Year 2015 total travel volume are represented by the larger circles; and
- Market Share - Market segments that are projected to have high transit market share are represented by points to the right of the chart.

EXHIBIT 3-9
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Overall Comparison of 1985 Baseline Travel
to the Year 2015 Future Scenarios

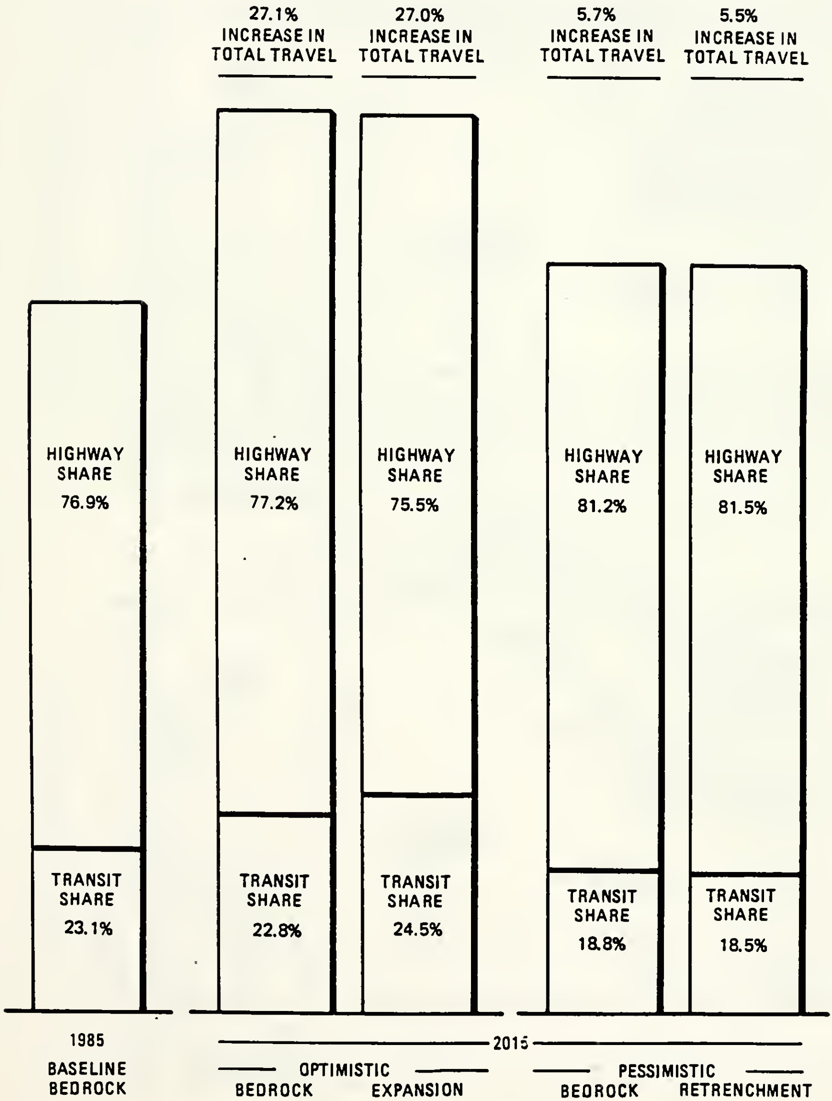
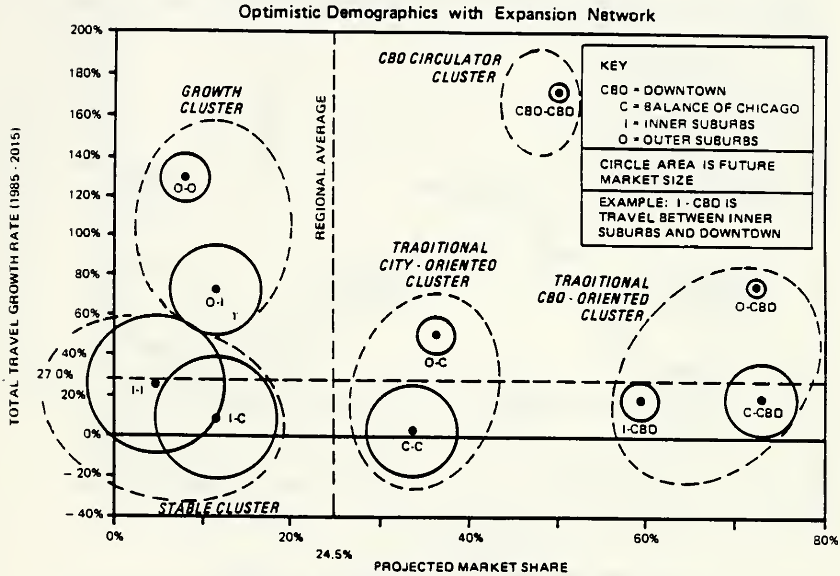


EXHIBIT 3-10
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Assessment of Future Travel Market Segments
Optimistic Demographics



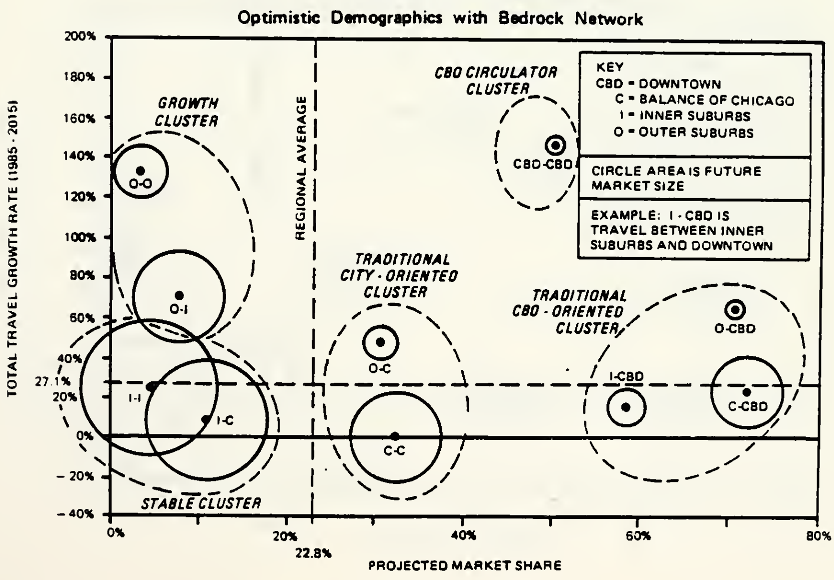
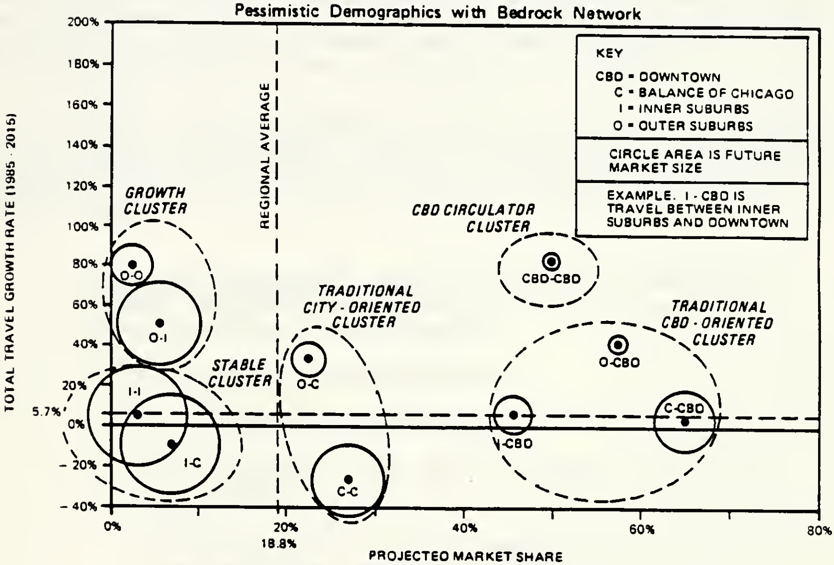


EXHIBIT 3-11
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Assessment of Future Travel Market Segments
Pessimistic Demographics



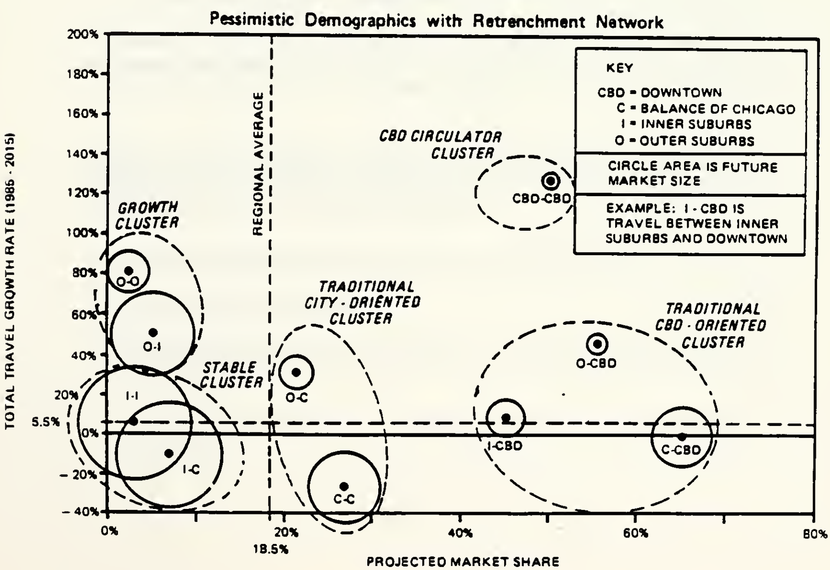


Exhibit 3-10 illustrates the optimistic demographic scenarios with both the bedrock and expansion transit networks. The two graphs are separated into four quadrants by the dashed lines denoting average growth rate and average market share. The optimistic demographic scenarios with bedrock and expansion networks show a positive growth rate in all market segments, and a virtually identical 27 percent increase in overall travel compared to 1985. The expansion network has a slightly higher average market share than the bedrock network (24.5 percent versus 22.8 percent) due to increased transit availability and accessibility in the region, plus an expected higher transit market share. However, only the expansion network has a net increase in transit market share compared to the 1985 regionwide estimate of 23.1 percent (A.M. peak period work trips).

In reviewing these market segment locations on the "map" of projected growth rate versus projected market share, market segment characteristics emerge that can be used to group market segments into clusters — clusters that are particularly relevant to the definition of market strategies. These clusters are defined as follows:

- Traditional CBD-Oriented Cluster - This cluster includes market segments that have been historically strong for transit. In general, this cluster is characterized by:

  - High transit market share (68 percent)
  - Low to moderate growth (23 percent)
  - Low to moderate market size (18 percent of the total market in 1985)
  - High percentage of overall regional transit volume (54 percent of total transit volume in 1985).

  As shown on Exhibit 3-10, this cluster includes travel between the inner suburbs and the CBD, the City and the CBD, and the outer suburbs and the CBD market segments.

- Traditional City-Oriented Cluster - This cluster includes travel within the city as well as long-distance travel to the city not focused on the CBD. This cluster has:

  - Above average transit market share (30 percent)
  - Low growth (9 percent)
  - Moderate market size (23 percent of the total travel market in 2015)
  - Moderate percentage of overall transit volume (30 percent in 1985).

This cluster includes travel within the city (C-C), but not to the CBD, as well as longer distance travel between the city and the outer suburbs (O-C).

- Growth Cluster - This cluster represents the emerging, largely suburban oriented, travel markets characterized by higher growth. In general, this cluster is characterized by:

  - Above average growth (88 percent from 1985 to 2015 optimistic)

  - Moderate market size (22 percent of total travel market in 2015)

  - Low transit market penetration or share using conventional transit technology and solutions (up to 10 percent for the optimistic scenario and expansion network).

  This cluster consists of travel between the inner and outer suburbs and travel between outer suburbs and other outer suburbs (the O-I and O-O market segments).

- Stable Cluster - This cluster represents the largest travel markets with only moderate growth and transit penetration. More specifically, it is characterized by:

  - Large travel market size (43 percent of total travel market in 1985; 40 percent in 2015)

  - Low to moderate market share (6 percent in 1985; 5 to 7 percent in 2015)

  - Low market growth (16 percent for 2015 optimistic scenario; -2 percent for 2015 pessimistic.

  This cluster consists of travel between inner suburbs and other inner suburbs and travel between inner suburbs and the city (I-I and I-C market segments).

- CBD Circulator Cluster - This is a unique cluster focused on downtown Chicago consisting of short trips that both begin and end in the downtown area, excluding CBD links of trips originating or ending outside the CBD. This segment consists of only one cluster, but typically has a:

  - Small overall travel market (only 1 percent or less of total travel)

  - High market share (approximately 50 percent)

  - High market growth rate (more than double).

3.2.3.1 Market Cluster Changes for Optimistic Scenario

For the traditional CBD-oriented travel market cluster, the 2015 optimistic-bedrock analysis shows that the average market share is 68 percent — ranging from 60 to 75 percent for the individual market segments. Market growth is below average, at approximately 23 percent, compared to the average growth rate for all markets of 27 percent. The traditional market cluster represents approximately 18 percent of the total travel market in 2015, but the transit volume from this market cluster is 53 percent of the total transit volume. From the viewpoint of maximizing transit volume for the region, strategies that couple transit service improvements to regional development initiatives are needed that will increase market growth for this cluster (i.e., move this cluster vertically on the chart). The addition of new transit service with the expansion network results in only one percent market share increase for transit. Thus, expansion of this market cluster probably will rely on the continued strength of downtown and the growth in longer distance travel to downtown. This will require external actions to stimulate economic activity — actions that can be stimulated, but not completely controlled by RTA and Service Board initiatives.

The traditional non-CBD city focused travel market cluster shows modest (19 percent) travel market growth under the optimistic scenario, but only modest increases in transit market share from 30 percent in 1985 to 31 percent in 2015 in the bedrock system and 34 percent in 2015 with an expanded network. Nevertheless, this cluster accounts for 30 percent of all existing transit volume in 1985 and 27 percent in 2015 under both the expansion and bedrock service levels — the second largest market cluster from the viewpoint of transit ridership.

The growth market cluster for the optimistic-bedrock scenario has an average growth rate of 88 percent, but a market share value of only 5 percent in 1985. By 2015 this increases to 6 percent in the bedrock network case, but improves to 10 percent in the expansion network alternative. The total market volume in this cluster increases from 15 percent in 1985 to 22 percent in 2015. Transit travel in this cluster accounts for less than 10 percent of the total transit volume for the region. The contribution of the growth market to overall transit volume, while small, shows dramatic growth. In 1985 this market supplies only 3 percent of total ridership; by 2015 under the bedrock service, this percentage increases to 6, and with the expanded service it grows to 9 percent.

This is a particularly difficult and expensive market to tap for transit due to the typical lower density of activity and dispersion of tripmakers. The addition of substantial, mostly circumferential service in the suburbs in terms of the expansion network, therefore, has only minor impact on the aggregate transit market share. Initiatives to concentrate development, coupled with new types of service, appear to be the direction to pursue for this market cluster. Whether the reward in terms of riders is worth the investment and risks is the key issue for this cluster. Experimentation with new types of service, coupled with transit conducive development patterns and development or local area support for regional network access services, will be necessary before major investments can be justified for this market.

The stable market cluster is virtually unchanged by the new service included in the expansion network. For both bedrock and expansion networks under the optimistic demographic forecasts, the aggregate cluster growth is 16 percent, and transit market share is 8 percent. This cluster represents 40 percent of the region's travel volume and 13 percent of the region's transit volume. Extensions of existing service, particularly with increased amenities, is suggested by these results as a means to increase transit market share.

The CBD circulator cluster shows high growth and market share in the optimistic scenarios (150 percent) with an additional 20 percentage points induced by the downtown distributor system. Even with the higher market share for this cluster (approximately 50 percent), the percentage of the region's total transit volume is only 1 or 2 percent. However, the addition of improved downtown circulation service not only stimulates the intra-downtown market growth and transit share, it also supports and maintains the CBD-oriented market segments of the "traditional" market cluster by providing additional linkages to CBD origins and destinations.

3.2.3.2 Market Cluster Changes for Pessimistic Scenarios

The pessimistic scenarios, one with the bedrock network and the second with the retrenchment network, show the impacts of less favorable development patterns on transit markets (Exhibit 3-11). While the overall market segments and clusters remain in the same relative positions on the pessimistic forecast chart as on the optimistic forecast chart, there are significant drops in both total market growth rate and projected transit market share. The total travel volume growth rate drops from the 27 percent range for the optimistic scenarios to less than 6 percent for the pessimistic scenarios. Projected transit market share drops from the 23-25 percent range for optimistic scenarios to 18-19 percent for pessimistic situations. These overall averages clearly illustrate how important renewed economic vitality in the Chicago region is to the RTA and Service Boards. The aggregate loss of transit riders from the 2015 optimistic-bedrock scenario to the pessimistic-bedrock scenario is over 30 percent. The loss between the optimistic-expansion to the pessimistic-retrenchment is even greater — 37 percent.

The traditional CBD-oriented market cluster shows an overall 6 percent increase in 2015 from the 1985 levels as well as a shift in market share points from 69 percent (1985) to 58 percent (2015). Thus, with the overall market virtually flat and the transit share eroded, the overall transit ridership drops 9 percent. Even though under the pessimistic-bedrock scenario transit volume drops 11 percent, it is still the cornerstone for the overall transit market at 57 percent of all transit trips.

The introduction of reduced service levels from the retrenchment network has a negligible effect on the traditional CBD-oriented market cluster, indicating that under the pessimistic scenario, disinvestments could be undertaken to reduce capital and operating costs with relatively minor losses in ridership. The aggregate market share for this cluster is 58 percent for both the bedrock network and the retrenchment network.

The traditional city-oriented market cluster declines in total volume by 15 percent from 1985 to 2015 for the pessimistic forecasts. Market share also drops from 30 percent to 26 percent, resulting in an overall transit volume drop of over 28 percent. As a consequence of this transit volume loss, the contribution of this market to overall transit volume drops from 30 percent in 1985 to 25 percent in 2015.

The imposition of a reduced level of service in terms of the retrenchment network has a neglible effect on market share or transit volume indicating that disinvestments could be undertaken under pessimistic demographic circumstances with nominal loss of ridership.

The growth market cluster still shows strong growth in the pessimistic scenarios, though for the bedrock network, the average of 59 percent growth is 20 percentage points lower than the growth rate for the optimistic-bedrock case (89 percent). Again, the retrenchment alternative has virtually no effect on this market, as the transit share drops less than half a percentage point, to 4 percent. Even with a slight drop in market share, the higher growth rate for the market as a whole means that the contribution of the growth market cluster to the overall transit volume increases from 3 percent in 1985 to 5 percent in 2015.

The pessimistic demographic effects on the stable market are considerable with this cluster actually showing a 2 percent overall decline from 1985 levels, compared with a 16 percent increase for the optimistic scenarios. The overall cluster also has a reduced market share rate 5 percent versus 7 percent when comparing the 2015 pessimistic to the 2015 optimistic results.

The overall lower level of downtown activity in 2015 for the pessimistic scenario results in a lower, but still strong, growth rate (80 percent) for the CBD circulator market cluster, compared to the optimistic scenario (150 percent).

In summary, regardless of the demographic profile or the service level plans analyzed, the ranking of the various market clusters remains as follows:

- Traditional-CBD focus (50 to 57 percent)
- Traditional-City or high density urban focus (25 to 30 percent)
- Stable (11-13 percent)
- Growth (3 to 9 percent)
- CBD circulator (1 to 2 percent)

The relative contribution and levels of these markets vary (Exhibit 3-12) as described above based on the impacts of economic activity and service levels. In all cases, the impacts of population and employment levels are the most important factors influencing transit ridership. Service level changes are relatively minor, but they are important to maximize new opportunities where they exist and to reduce costs by adjusting service to new market conditions, as needed.

The contribution to annual revenue by the change of one market share point is another means of measuring the importance of an individual market cluster as shown below.

Potential Value of a
Market Share "Point" by Segment

Market Clusters	Annual Revenue per Market Share "Point" ($s in Millions)
Traditional - CBD	$5.4
Traditional - City	$4.1
Stable	$5.8
Growth	$2.2

This analysis indicates that the stable market cluster has the greatest contribution for each transit share gained followed closely by the two traditional markets — CBD and high density urban or city. Least productive for each market share point gained is the growth market.

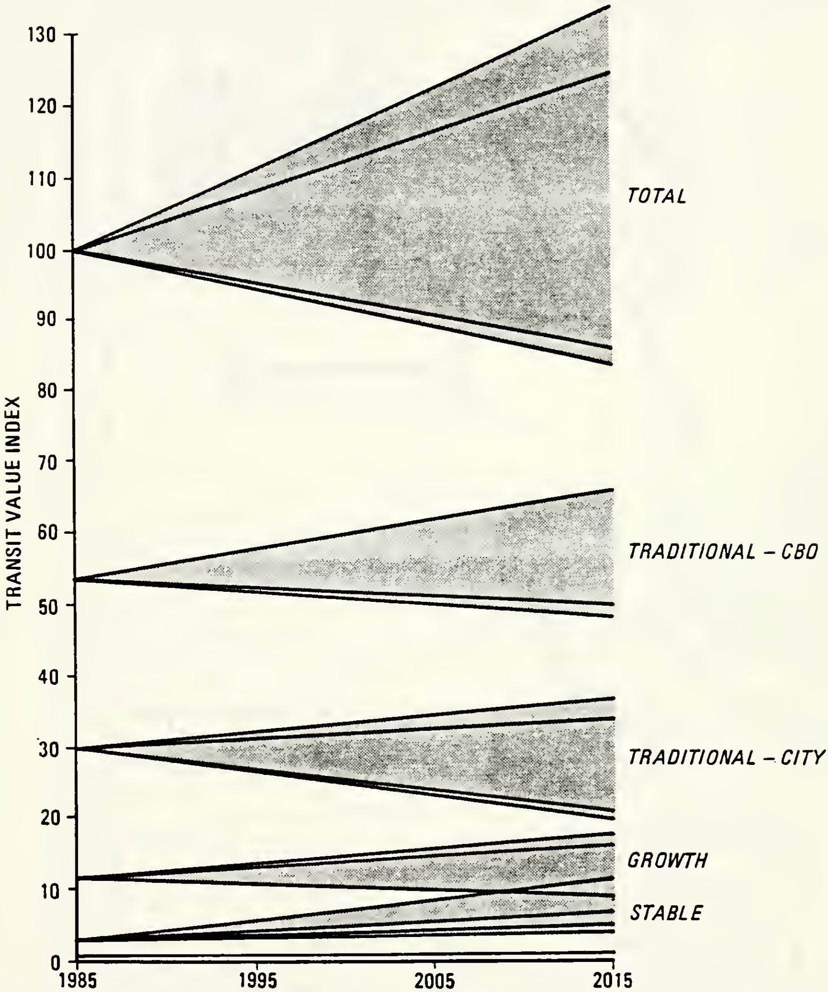
3.2.3.3 Market Cluster Performance - Best and Worst Cases

The contribution of transit share and market growth are shown when the travel scenarios are compared. Two market impact comparisons are described: the optimistic versus pessimistic demographic/economic profiles with the bedrock network — that is changes in development only with no change in transit services; and the optimistic development profile with extensive service improvements versus a pessimistic development profile with a retrenchment network — a "best of the best" case versus a "worst of the worst" case.

Comparing the pessimistic-bedrock market profile with the optimistic-bedrock for 2015 (Exhibit 3-13) illustrates that individual market segments are either growth-oriented, market share-oriented, or a combination of both. On this exhibit, the arrows indicate the change from the pessimistic to optimistic circumstance for each market segment. Segments in the growth market cluster, O-O and O-I, have more vertical arrows indicating that there is only minor market share change but significant overall market growth. Thus, increased transit

EXHIBIT 3-12
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Market Cluster Transit Travel Volumes
for Various Scenarios and Networks



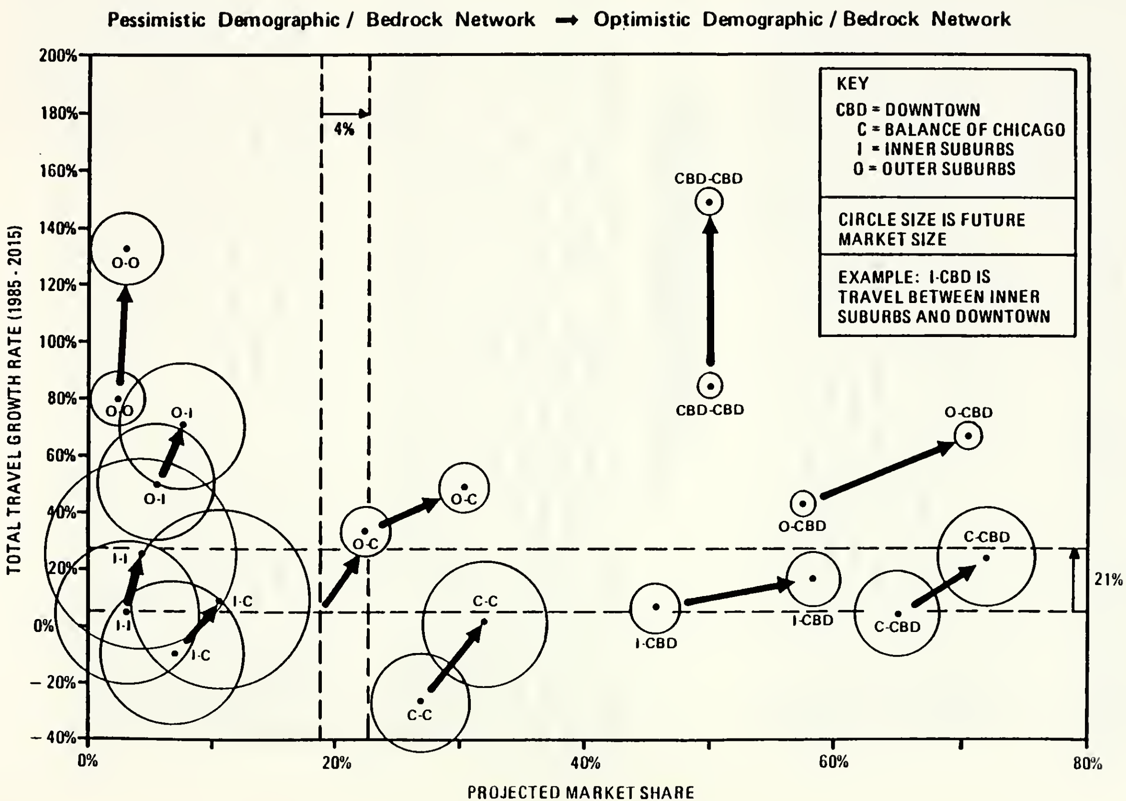
CLUSTER	1985	2015 OPTIMISTIC		2015 PESSIMISTIC	
		BEDROCK	EXPANSION	BEDROCK	RETRENCHMENT
TRADITIONAL - CBD	54	66	66	50	48
TRADITIONAL - CITY	30	34	37	21	20
GROWTH	3	7	12	5	4
STABLE	12	16	17	9	9
CBD - CIRC	1	2	2	1	1
TOTAL	100	125	134	86	84

Source: CATS Analyses

EXHIBIT 3-13

RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Comparative Assessment of Future Travel Scenarios



volumes occur because of market growth with little or no increase due to market penetration. On the other hand, the transit volume for the traditional-CBD oriented cluster, as shown by the arrows pointed to the right, indicates that transit volume growth is predominantly from share increases with minor contributions from market growth rate. In aggregate, the increase in total travel for the optimistic bedrock analysis in 2015 over the pessimistic bedrock is 21 percent; market share increases 4 percent.

Comparing the pessimistic retrenchment analysis for 2015 to the optimistic expansion analysis also for 2015 shows the relative impact not only of demographic shift but also service changes — essentially a "best of the best" versus a "worst of the worst" from a market perspective (Exhibit 3-14). In aggregate, there is little difference between this comparison and the prior comparison. Total travel volume is 21 percent greater in the optimistic versus pessimistic case regardless of network change and the market penetration change is 6 percent for the network change comparison and 4 percent for the no network change alternative. The same pattern of selected market segments being growth-oriented and selected markets being share-oriented still remains, although there is some increase in share, particularly for the growth markets.

3.2.3.4 Transportation System Performance Given Future Scenarios and Alternatives

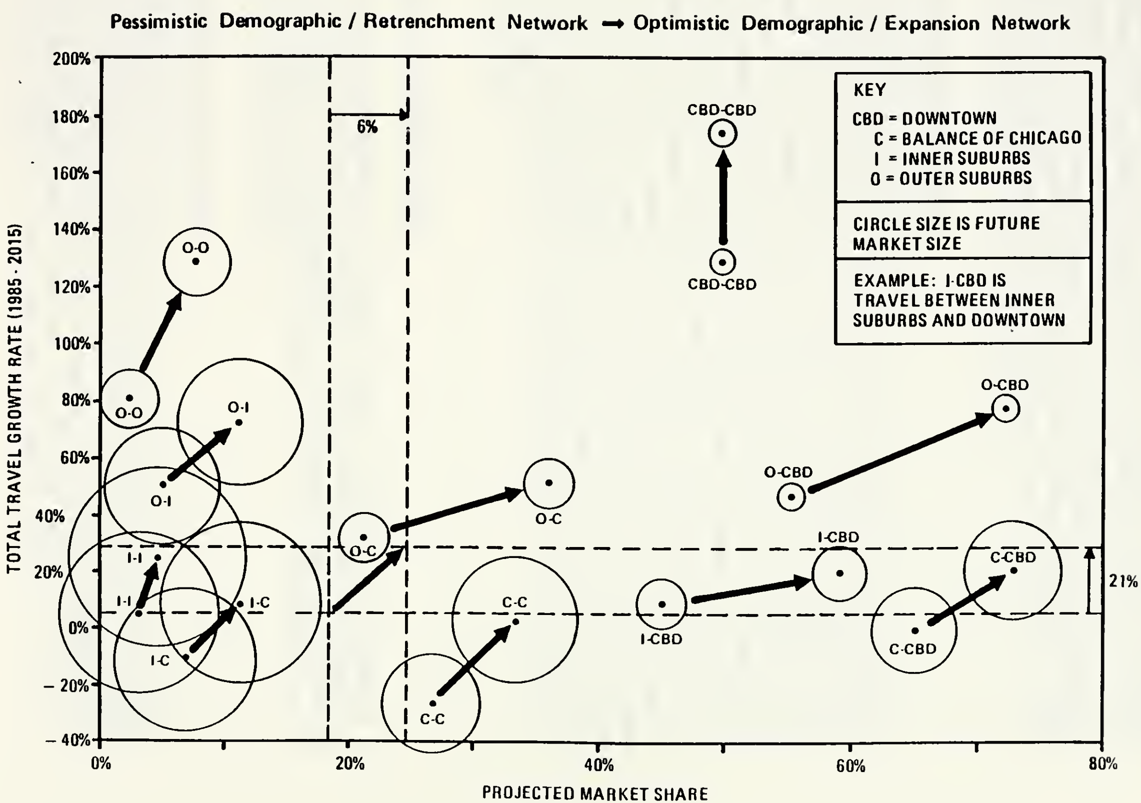
These demographic scenarios and alternative transit networks will produce side effects on the highway system. Highway speeds in the Year 2015 are projected to decrease across the entire regional roadway network when compared with present conditions. Paradoxically, the optimistic demographic future worsens the highway travel situation by decreasing regionwide roadway speeds by 11 percent. This speed reduction is especially evident in the outer and inner suburban areas where speeds decrease 18 percent and 16 percent, respectively. The CBD will also be impacted by a 14 percent decrease in average auto speeds. Expansion of the transit network recovers 2 percentage points of the regionwide highway speed decrease, but has little impact in the suburban areas. Auto travel time will increase in the future; however, transit can help to alleviate some of this impact.

A pessimistic demographic scenario will reduce average highway speeds about 8 percent. This impact is similarly concentrated in the suburban areas with the highest expected growth when compared to 1985 highway conditions. Retrenchment of the transit network under this slow growth scenario will further decrease highway speeds everywhere but within the city. Reduced auto access to city rapid lines and the further dispersion of residential locations will slightly increase city travel speeds. Outside of this, roadway travel speeds are expected to drop significantly in the CBD and inner suburban areas which would be especially hard hit by this retrenchment of the transit network. Therefore, the extent of the transit network does have a direct effect on highway operations, and a retrenchment of the transit network will strain the highway system under any demographic future.

EXHIBIT 3-14

RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Comparative Assessment of Future Travel Scenarios



Congestion levels will increase regardless of the development scenario and transit service provided. With an optimistic development pattern, regionwide speeds will drop by 11 percent; expanding the transit system reduces this drop to 9 percent. Under a slower, pessimistic growth scenario, congestion is less scarce — only 8 percent. If the transit system is reduced following the retrenchment alternative, congestion-induced average speeds would worsen considerably. Thus, the congestion impacts of transit service elimination are considerable whether optimistic or pessimistic development patterns prevail.

3.2.4 Market Perspective Summary

The low change in market penetration even under optimistic and expansion network conditions indicates that traditional transit services are not appealing to the major portion of the travel market. For the traditional-CBD market, transit service is offering an option that is valued by the consumer resulting in high market share. These longer distance trips to the CBD (the traditional-CBD market) and travel within and to the city (the traditional-City market) are most conducive to conventional transit service penetration and growth and must be the cornerstone for the future RTA system. Growth markets cannot be ignored but must be approached with a variety of innovative, new approaches that will have market appeal to the suburban consumer. Defining the type of service that will appeal is only part of the problem for this market. The other part is defining an institutional and financial arrangement that will support this type of market initiative. Answers to these questions may lie in private sector financial support and private sector service provision. To determine the "right" answer or answers will require experimentation in the transit service delivery system concepts not only from the service or market perspectives but also from the institutional and financial perspectives.

3.3 CAPITAL FUNDING NEEDS

As previously discussed, the region's transit infrastructure represents a substantial "sunk-cost" in an asset base that would cost $15 billion to replace. A major consideration of the Strategic Plan is to determine the future costs of maintaining, expanding, or shrinking that asset base and the implications vis-a-vis future needs for capital investment.

3.3.1 Description of BIP Process

The development of a Bedrock Investment Program (BIP), or a capital spending program, was undertaken as a benchmark for defining long-range (30 year) capital needs and funding requirements of the RTA's Service Boards. The BIP is the minimum level of capital spending necessary to perpetuate existing transit services. In other words, the BIP defines the level of spending necessary to maintain the present infrastructure for the next 30 years to 2015.

The BIP process involved an inventory of physical assets (excluding land) by major line segment and principal budget category for each of the Service Boards. Within each budget category, a physical inventory, condition review, and rehabilitation and capitalized maintenance requirement was estimated by type of asset. Through the identification of asset ages, assumptions of replacement costs, and estimates of life cycle, rehabilitation/maintenance costs and life cycle; and RTA's cost responsibility, 30 year program costs were calculated. Additionally, deferred replacement costs, the cost of a missed past replacement cycle, were also computed. Since program costs are highly sensitive to variables such as replacement life, a "Stretch" BIP was also calculated. The Stretch BIP is not presented as a viable option, but merely to show the absolute "bare bones" requirement to operate with some concern for safety, but no consideration for amenities or reliability of service. The basic replacement lives of major assets for both the BIP and the Stretch BIP are as follows:

	BIP	Stretch BIP
Track	20-40 Years	Increase 20%
Rolling Stock	12-40 Years	Increase 25%
Structures	70-100 Years	No Change
Electric/Signal/Communication		
Train Communication Signals	20 Years	50 Years
Substations	40-50 Years	75 Years
Interlockers	40 Years	50-60 Years
Automatic Block Signals	40 Years	50 Years
Signals	25 Years	30 Years
Centralized Train Control	40 Years	50 Years
Distribution	50 Years	100 Years
Support Facilities		
Yards	40 Years	80 Years
Support Equipment	25 Years	50 Years
Stations		
Buildings	50 Years	70 Years

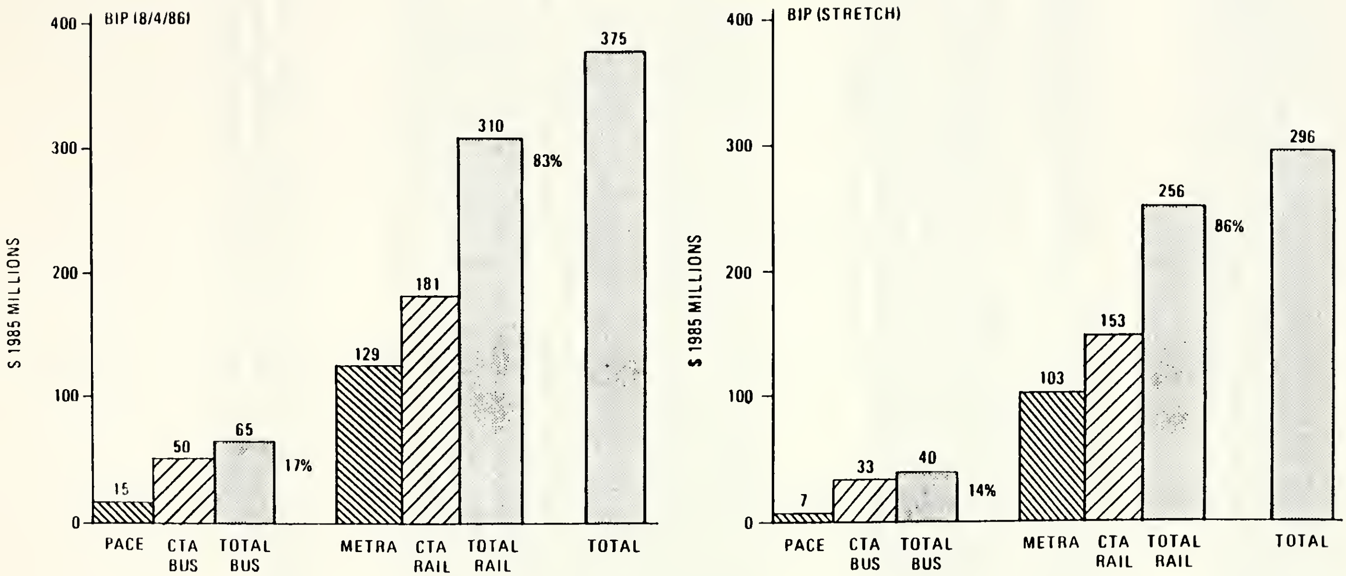
The 30 year BIP results including the Stretch BIP and deferred replacement costs are presented in the following section.

3.3.2 Future Needs - BIP/Stretch/Deferred

The total 30 year capital requirement for the three Service Boards will be $11.3 billion, or $375 million annually (Exhibit 3-15). Approximately 83 percent of the annual requirement will be for rail; the remaining 17 percent for bus. The consolidated requirement for CTA is $231 million per year, or 62 percent of the total annual requirement. Individually, CTA-Rail's requirement is $181 million per year, while the CTA-Bus need is $50 million per year. Metra's annual need is $129 million per year; while Pace is estimated to require $15 million annually. The predominance of rail capital requirements is an indication of the capital intensity of this mode relative to bus.

EXHIBIT 3-15
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

RTA Bedrock Capital Program
Average Annual Spending Level*



* INCLUDES REPLACEMENT AND REHABILITATION OF SOUTHWEST RAPID TRANSIT LINE AND HOWARD DAN RYAN CONNECTION

- ANNUAL CAPITAL REQUIREMENTS ARE $375 MILLION, REQUIREMENTS ARE REDUCED 21% IN STRETCH CYCLE
- RAIL REQUIREMENTS ARE 83% OF TOTAL REQUIREMENT
- CTA'S NEED IS $231 MILLION, 62% OF THE TOTAL
- STRETCHING ASSET LIFE CYCLES REDUCES BUS REQUIREMENTS BY 38% VERSUS 2% DECREASE IN RAIL REQUIREMENTS

The graph on the right of Exhibit 3-15 illustrates the Stretch BIP results. By stretching life cycles of selected assets, annual capital requirements are reduced to $296 million, a 21 percent decrease. Bus assets decreased more dramatically than rail assets, declining 38 percent, from $65 million to $40 million per year. Rail requirements declined 17 percent. In general, the shorter lived assets typical of the bus mode display greater sensitivity to changes in life.

CTA-BIP

The CTA's 30-year requirement is $6.9 billion (Exhibit 3-16), which translates to an annual average requirement of $231 million ($181 million for rail, and $50 million for bus).

CTA's capital requirements grow steadily through the next three decades from $2.0 billion during the first ten years to $2.2 billion during the second decade, and up to $2.7 billion during the 2006-2015 time period. The major component of CTA's capital program will be rolling stock, comprising nearly 60 percent of the total requirement. Additionally, 14 percent of the 30 year need is for structures, which is almost exclusively (98 percent) the rehabilitation of the system's elevated structure.

Metra-BIP

Metra's capital requirement for the 1986-2015 period is $3.9 billion, resulting in an average annual requirement of $129 million per year. Most of Metra's capital requirements are in the latter two decades. Approximately 23 percent, or $886.5 million, of Metra's total $3.9 billion requirement occurs during the first 10 years of the 30 year period; 37 percent ($1.4 billion) during the 1996-2005 time period; and 40 percent ($1.5 billion) during the third decade. The predominant share of program expenses is for the rehabilitation and replacement of rolling stock, comprising nearly 30 percent of the total program expense. Nearly 90 percent of the rolling stock need, however, becomes due after 1996. Similarly, nearly 96 percent, or $947 million of the capital costs for structures are required after 1996. This capital cost profile for structures reflects the replacement of many birdges originally built during the late 1800s and early 1900s. Track replacement and electrical/signal system expenditures are the third and fourth largest categories at $603.6 million for track and $606.5 million for electrical and signals.

Pace-BIP

Pace's total program requirement is $444 million; annual capital requirements are approximately $15 million. Replacement and rehabilitation of rolling stock (buses) represents 75 percent of that requirement.

EXHIBIT 3-16
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT

Service Board Ten-Year BIP Capital Profile
(Millions - 1985 $)

	1986-1995	1995-2005	2005-2015	Total	Percent of Service Board Total
CTA					
Track	52.3	77.1	132.8	262.2	3.8%
Structure	337.5	328.9	332.0	998.3	14.4%
Elec/Signal	103.1	135.0	165.0	403.1	5.8%
Support Facilities	143.4	189.5	138.4	471.3	6.8%
Support Equipment	152.0	169.8	160.8	482.6	7.0%
Stations	63.4	36.7	66.3	166.4	2.3%
Rolling Stock	1,127.2	1,301.3	1,728.5	4,157.0	59.9%
	1,978.9	2,238.3	2,723.8	6,941.0	100.0%
METRA					
Track	197.5	210.0	196.1	603.6	15.7%
Structures	42.7	424.9	522.5	990.1	25.7%
Elec/Signal	228.2	244.6	133.7	606.5	15.7%
Support Facilities	195.8	66.1	26.4	288.3	7.5%
Support Equipment	17.5	14.5	17.6	49.6	1.2%
Stations	82.7	46.9	58.1	187.7	4.9%
Rolling Stock	122.1	434.8	573.5	1,130.4	29.3%
	886.5	1,441.8	1,527.9	3,856.2	100.0%
PACE					
Track	0	0	0	0	—
Structures	0	0	0	0	—
Elec/Signal	2.6	2.6	2.6	7.8	1.7%
Support Facilities	32.2	11.2	9.0	52.4	11.8%
Support Equipment	15.0	15.1	11.8	41.9	9.4%
Stations	2.7	2.7	3.1	8.5	2.0%
Rolling Stock	111.7	104.9	116.8	333.4	75.1%
	164.2	136.5	143.3	444.0	100.0%

The previous discussion focused on the needs for keeping the physical plant in a reasonable operating state. A second part of the asset analysis focused on elements where prior rehabilitation or replacement has been substantially delayed or deferred, creating a "going-in" backlog of capital need which totals $2.24 billion. Primary areas of deferral have been in structures (primarily CTA), electrical and signal system (CTA and Metra), and stations (CTA and Metra).

<u>CTA-Deferred</u>

CTA's deferred capital expense is 81 percent of the total for all Service Boards at $1.8 billion (Exhibit 3-17). Fifty-two percent, or $945 million, is associated with the elevated structure. The CTA currently operates on 91 track miles of elevated structure; the average age of this asset is 84 years, whereas, the BIP assumption of the elevated structure's useful age is 75 years. Other major deferred assets include over-age rolling stock comprising 15 percent, or $273 million; and stations accounting for 12 percent, or $224 million. Track replacement has been kept relatively current and represents only 1.4 percent of the deferred expenditures.

<u>Metra-Deferred</u>

Metra's deferred replacement expense is primarily in electrical/signal/communication, comprising almost 70 percent of Metra's $433 million deferred capital requirement. Of the electrical/signal/ communication deferred expenses, approximately 76 percent are for interlockers. A review of all Metra interlockers indicates that 36 percent of the total number located throughout the system are beyond their replacement cycle.

Two other categories are of significance — stations and support facilities. Support facilities, mostly yards and yard structures, are $46 million behind normal replacement requirements, and stations total $48 million in deferred capital requirements.

<u>Pace-Deferred</u>

Pace has minimal deferred capital requirements of less than $200,000 split approximately evenly between support equipment and stations (predominantly shelters and signs).

EXHIBIT 3-17
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT

Service Board Ten-Year Deferred Capital Profile
(Millions - 1985 $)

	1986-1995	1995-2005	2005-2015	Total	Percent of Service Board Total
CTA					
Track	26.4	0	0	26.4	1.4%
Structure	945.3	0	0	945.3	52.4%
Elec/Signal	105.9	0	0	105.9	5.9%
Support Facilities	133.6	0	0	133.6	7.4%
Support Equipment	96.9	0	0	96.9	5.4%
Stations	224.0	0	0	224.0	12.4%
Rolling Stock	273.3	0	0	273.3	15.1%
	1,805.4	0	0	1,805.4	100.0%
METRA					
Track	16.1	0	0	16.1	3.7%
Structures	1.2	0	0	1.2	0.2%
Elec/Signal	296.7	0	0	296.7	68.6%
Support Facilities	45.8	0	0	45.8	10.6%
Support Equipment	5.1	0	0	5.1	1.2%
Stations	48.3	0	0	48.3	11.2%
Rolling Stock	19.5	0	0	19.5	4.5%
	432.7	0	0	432.7	100.0%
PACE					
Track	0	0	0	0	—
Structures	0	0	0	0	—
Elec/Signal	0	0	0	0	—
Support Facilities	0	0	0	0	—
Support Equipment	0.1	0	0	0.1	50.0%
Stations	0.1	0	0	0.1	50.0%
Rolling Stock	0	0	0	0	—
	0.2	0	0	0.2	100.0%

The total requirement over the next three decades for bedrock improvement purposes and "catch-up" on deferred expenditures is summarized below:

	BIP	Deferred	Total	Percent of Total
CTA	$ 6,941.2	$1,805.4	$ 8,746.6	64.9%
Metra	3,856.1	432.7	4,288.8	31.8%
Pace	444.0	0.2	444.2	3.3%
Total	$11,241.3	$2,238.3	$13,479.6	100.0%

The requirements of a $13.5 billion program, even spread over the next three decades, led to an analysis to determine whether there was a possibility of spreading or reducing the expenditures by selectively extending normal asset life and focusing on critical elements (e.g., safety related). As previously described, this led to the "Stretch" BIP where life cycles were extended except for safety-related items (e.g., structures) and little or no concern for amenity/market/reliability-related items (e.g., parking facilities, rolling stock, etc.).

In the "stretch" BIP, CTA's capital requirements decrease 19 percent or $1.3 billion, from $6.9 billion to $5.6 billion (Exhibit 3-18). Proportional capital requirements by decade for the BIP and "stretch" BIP remain about the same. In the "stretch" BIP, 29 percent of total requirements are programmed during the first decade, 29 percent during the second, and 42 percent in the third. In the normal BIP, requirements for these decades are 29 percent, 32 percent and 40 percent, respectively.

Metra's capital requirements decrease 20 percent, from $3.9 to $3.1 billion. The greatest impact of extending asset service lives occurs during the 1986-1995 time period, in which requirements dropped from $886 million to $474 million, a 47 percent decline, indicating a shift of requirements to the latter two decades and beyond. The most significant asset group decrease was electrical/signal/communication — nearly 36 percent. A 42 percent reduction in deferred expenses is achieved as assets which had previously missed scheduled replacements prior to 1986 now have adjusted replacements during the 30 year program period. Pace requirements are reduced 50 percent (to $218 million), but remain a relatively small part of the total.

3.3.3 Capital Funding Needs Compared to Funding Sources

To summarize the major points of this section, the total 30 year capital requirement of the RTA's Service Boards is $11.3 billion, translating to an average annual need of $375 million per year (Exhibit 3-19). However, deferred capital, which represents the accumulated value of missed replacements prior to 1986

EXHIBIT 3-18

RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Service Board Ten-Year "Stretch" Capital Profile
(Millions - 1985)

	1986-1995	1996-2005	2006-2015	Total
CTA				
BIP				
Track	42.5	41.1	143.3	226.8
Structure	337.5	328.9	332.0	998.5
Elec/Signal	61.8	76.7	132.6	271.1
Support Facilities	91.9	135.5	92.1	319.4
Support Equipment	123.3	137.3	141.4	402.1
Stations	60.3	36.0	63.1	159.4
Rolling Stock	881.0	890.8	1,446.6	3,218.4
	1,598.3	1,646.3	2,351.1	5,595.7
Deferred				
Track	0	0	0	0
Structure	945.3	0	0	945.3
Elec/Signal	20.4	0	0	20.4
Support Facilities	72.6	0	0	72.6
Support Equipment	72.5	0	0	72.5
Stations	220.8	0	0	220.8
Rolling Stock	99.1	0	0	99.1
	1,430.7	0	0	1,430.7
METRA				
BIP				
Track	163.8	178.5	165.5	507.9
Structures	42.7	424.9	522.5	990.1
Elec/Signal	97.9	131.7	158.3	387.9
Support Facilities	9.7	54.7	18.6	83.1
Support Equipment	4.0	14.2	0.1	18.3
Stations	54.0	27.8	86.9	168.5
Rolling Stock	101.7	179.0	661.7	942.4
	473.8	1,010.8	1,613.6	3,098.2
Deferred				
Track	2.6	0	0	2.6
Structures	1.2	0	0	1.2
Elec/Signal	198.2	0	0	198.2
Support Facilities	3.5	0	0	3.5
Support Equipment	0.3	0	0	0.3
Stations	44.5	0	0	44.5
Rolling Stock	1.5	0	0	1.5
	251.8	0	0	251.8

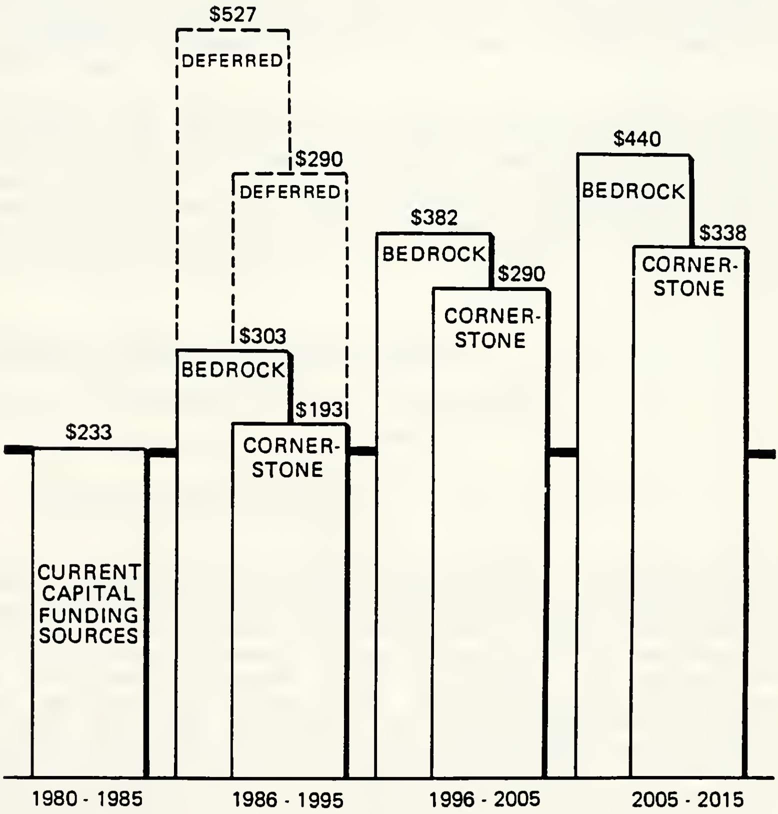
EXHIBIT 3-18 (Continued)

Service Board Ten-Year "Stretch" Capital Profile
(Millions - 1985)

	1986-1995	1996-2005	2006-2015	Total
PACE				
BIP				
Track	0	0	0	0
Structures	0	0	0	0
Elec/Signal	0	2.6	0.1	2.6
Support Facilities	3.5	1.3	3.5	8.3
Support Equipment	4.7	14.9	5.3	24.9
Stations	0.2	2.5	0.2	2.9
Rolling Stock	52.2	73.1	54.1	179.5
	60.6	94.4	63.2	218.2
Deferred				
Track	0	0	0	0
Structures	0	0	0	0
Elec/Signal	0	0	0	0
Support Facilities	0	0	0	0
Support Equipment	0	0	0	0.1
Stations	0	0	0	0.1
Rolling Stock	0	0	0	0
	0	0	0	0.2

EXHIBIT 3-19
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Annual Capital Requirements by Decade
Bedrock Plan Compared to "Stretch" Plan
(Millions of 1985 Dollars)



creates an additional $2.2 billion need. Selected asset life extensions achieved a 21 percent reduction in total capital requirements, decreasing average annual needs from $375 million per year to $296 million per year, not including deferred capital.

A review of the 30 year annual needs, segmented by decade, indicates a lower-than-average 1986-1995 requirement. Capital requirements during this period average $303 million per year, while requirements of the subsequent two decades rise to $382 million per year from 1996-2005, and to $440 million per year during the third decade. However, deferred capital, estimated for amortization during the first ten years of the BIP will increase the needs during the first ten years from $303 million per year to $527 million per year. "Stretch" BIP requirements by decade follow the same pattern of lower initial needs; requirements of the three decades are $213 million, $275 million, and $403 million per year, respectively. Adding the investment required to "catch-up" with deferred capital expenditures, increases requirements during the first decade to $376 million per year.

Comparing capital requirements with present levels of funding indicates severe shortfalls. With the exception of the 1986-1995 requirements of the "Stretch" BIP (excluding deferred capital), existing funding falls short of meeting requirements of the BIP and the "Stretch" BIP. Capital funding averaged $233 million per year from 1980 to 1985. Further, capital requirements are expressed in 1985 dollars; therefore if present available capital funding does not expand with inflation, the shortfall will be even more dramatic.

3.4 OPERATING COSTS AND FUNDING LEVELS

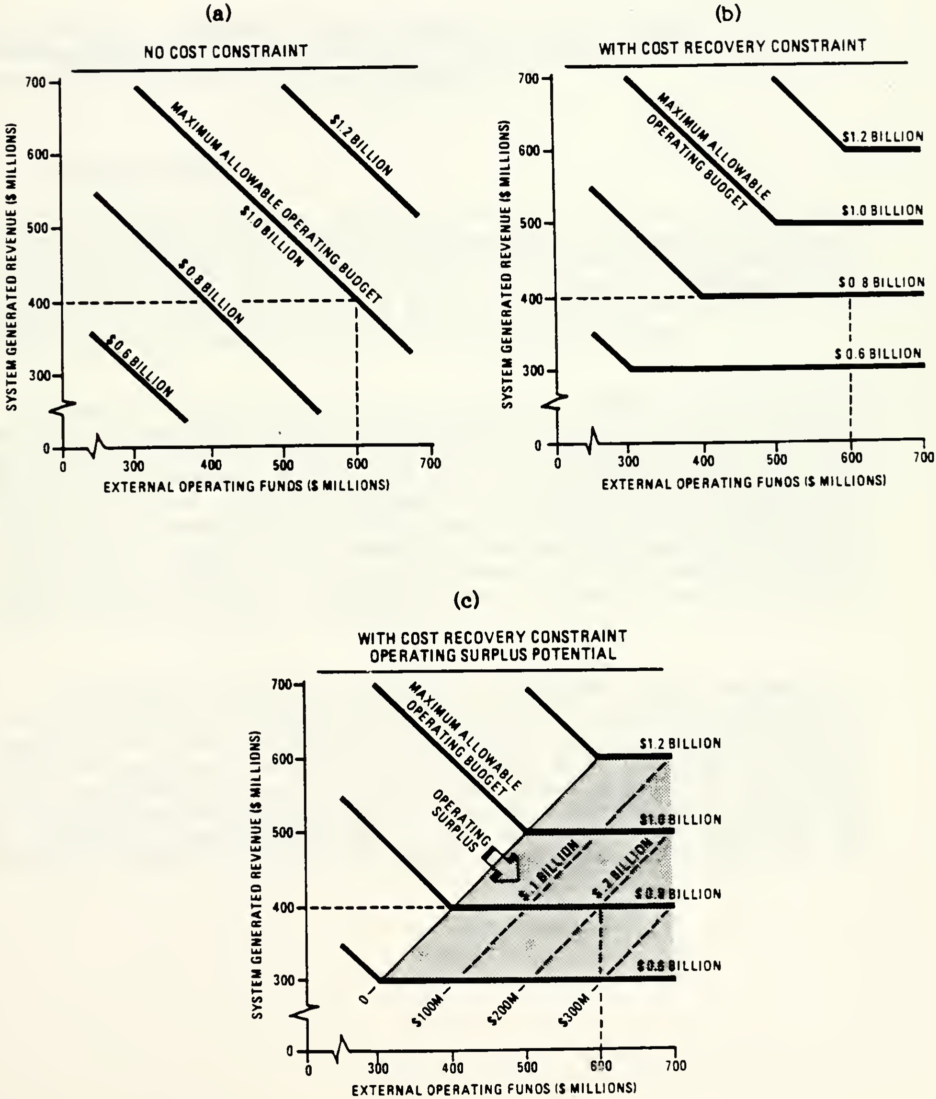
The RTA operating budget must meet two basic criteria:

- Total revenues must balance expenses; and
- System-generated revenue must be at least 50 percent of the RTA and Service Board expenses.

The first simply requires a balancing of cash flow; mathematically, $400 million of system-generated revenue and $600 million in external revenue could support a $1.0 billion operating budget (Exhibit 3-20a), if the 50 percent cost recovery constraint does not exist. The second criterion, however, states that at least half of operating expenses must be funded through system-generated revenues. In the previous example, though $1.0 billion in total revenue was generated, the operating budget would be restricted to $800 million (Exhibit 3-20b). Thus, under these funding conditions, a $200 million or greater surplus would be generated, since total revenues are $1 billion and expenses cannot exceed $800 million (Exhibit 3-20c). If, however, external funding were less than anticipated, say $300 million, action to prevent a $100 million deficit would be required, even though the cost recovery criteria would theoretically permit up to an $800 million budget.

EXHIBIT 3-20
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Allowable Operating Budgets
for Different Levels of System-Generated Revenue
and External Operating Funds



This example illustrates the fundamental relationships between the three elements that guide the RTA's financial process:

- System-generated revenue;
- External funding; and
- Operating expenses.

Developing strategic initiatives through the next decades requires an understanding of the degree of control and external influences over each of these elements in order to adopt proactive strategies.

3.4.1 External Funding

The requirement that at least 50 percent of the RTA and Service Board expenses be generated from internal sources presents a mathematically simple, but fiscally complex, requirement — operating expenses cannot be more than double the available subsidy sources unless fares are increased or ridership grows substantially. Therefore, the level of external funding and the stability of the existing external funding sources are critical to operations funding.

External operating funds for 1985 totaled $486 million, with the largest source of revenue, $342 million or 70 percent, from the retail sales tax. Historic real growth from 1980 to 1985, adjusted by the Consumer Price Index to 1985 dollars, indicates average annual growth of 2.7 percent (Exhibit 3-21). Short-run RTA forecasts show continued real growth of 1.7 percent annually through 1988. Optimistic and pessimistic sales growth rates were projected beyond 1988 based upon forecasted changes in real consumption rates and demographics. Optimistic "real" growth is projected to be 2.9 percent annually, while the pessimistic growth level is 1.2 percent per year. The dollar difference of these projections by 2005 is approximately $149 million (in 1985 dollars).

The allocation of sales tax revenue to each Service Board is defined by a direct distribution formula depending on where the tax revenue is collected — Chicago, or other Cook or Collar Counties. The RTA initially receives 15 percent of all sales tax revenue, regardless of the collection area, to perform its mission, provide centralized services and distribute the remainder to the Service Boards through a discretionary account. The remaining 85 percent of sales tax receipts are distributed directly (according to law) to each Service Board by the percentages shown in Exhibit 3-22. These formula distributions of sales tax

EXHIBIT 3- 21
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Sales Tax Yields
Adjusted by CPI to 1985

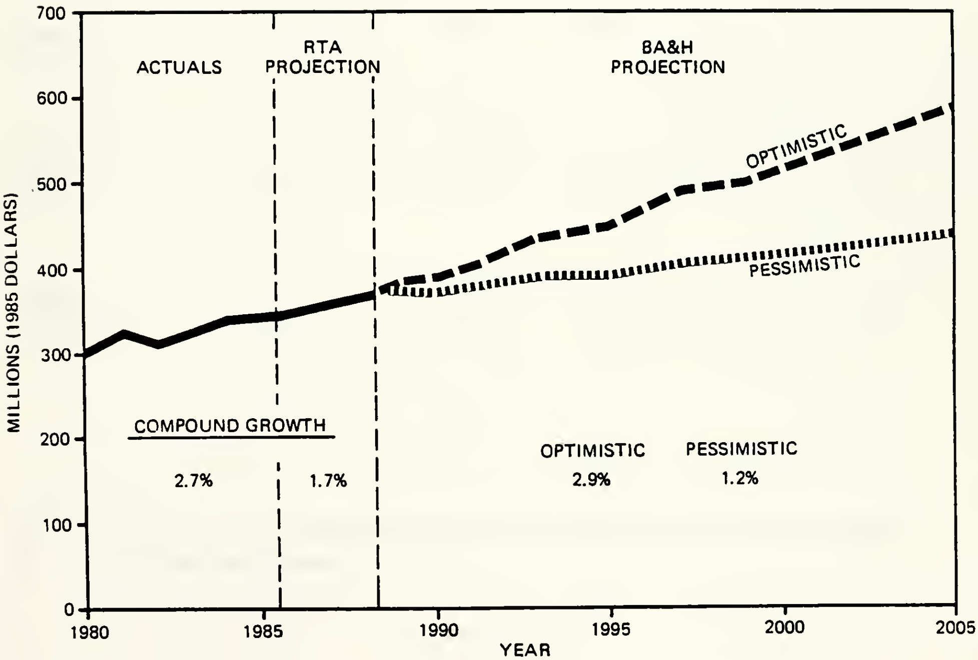


EXHIBIT 3-22
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Allocation of Sales Tax Collections

Jurisdiction of Sales Tax Receipts	Primary Allocation		Allocation of Direct Revenue to Service Boards		
	Direct to RTA(1)	Direct to Service Boards(2)	CTA	Metra	Pace
Chicago	15%	85%	100%	0%	0%
Suburban Cook	15%	85%	30%	55%	15%
Collar Counties	15%	85%	0%	70%	30%

(1) RTA funds for RTA requirements and discretionary allocation to Service Boards.

(2) In accordance with statute.

revenue to each Service Board are affected by changing population and employment levels and related tax receipts. The optimistic estimates of sales tax proceeds indicate that:

- All Service Board formula revenues will grow into the future; total formula proceeds for all Service Boards will grow from $291 million in 1985 to $505 million (Exhibit 3-23).

- CTA's formula revenues will rise 66 percent, from $152 million in 1985 to $252 million by 2005, but its share of the total direct sales tax receipts will be reduced from 52 percent to 50 percent.

- Metra's formula revenues will rise 80 percent, from $107 million in 1985 to $193 million in 2005, with its share increasing from 37 percent to 38 percent.

- Pace's formula revenues will rise 88 percent, from $32 million in 1985 to $60 million in 2005, with its share increasing from 11 percent to 12 percent.

The second highest external revenue source for the RTA is the State Public Transportation Fund (PTF). These are general revenue funds from the State of Illinois provided at a level equal to 25 percent of the sales tax yield in the six-county area. In 1985, this funding was $85 million, or 17 percent of the total from all external funding sources. These funds are allocated to the Service Boards at the discretion of the RTA as part of a multi-tier process that is based on relative subsidy requirement.

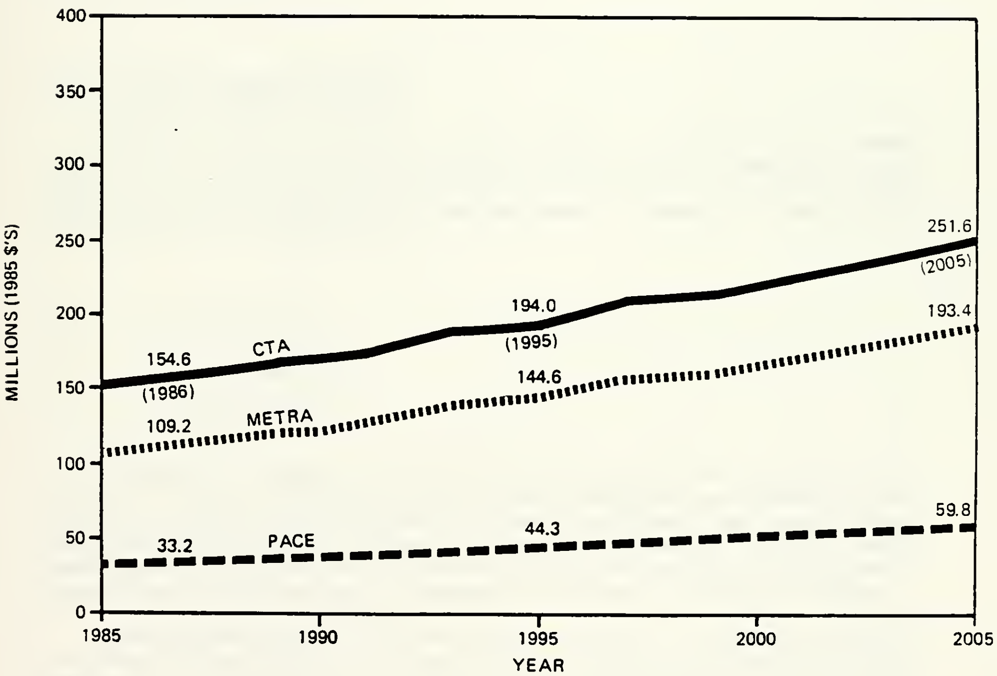
The third largest external source of funding is UMTA Section 9 operating subsidy, comprising $58 million in 1985, or 12 percent of total external funding. These funds are distributed to the Service Boards based on ridership. There has been considerable doubt about the longevity and level of this funding because of changing Federal attitudes and policy with respect to public transportation.

With the possible exception of UMTA Section 9 funding, the sources of external operating support are both secure and stable. They are secure, since they derive directly from sales tax yields; they are stable, since they tend to be inflation sensitive. Thus, if inflation increases, external funding should generally keep pace.

During economic recessions, however, sales tax yields typically drop, thus lowering the level of external funding. Higher unemployment will generally result in lower ridership and lower fare revenue. The statutory recovery ratio requirements would require immediate actions by the Service Boards in terms of service cuts, cost reductions, substantial fare increases, or combinations of these actions. These cost reductions might be required to meet either recovery ratio

EXHIBIT 3-23
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Retail Sales Tax Formula Allocation - Optimistic
Sales Tax Yields
1985 - 2005



requirements or the shortfall of overall revenue. In essence, responses may not be an option in the future because of the potential size of shortfalls and the substantial lag time required to effectuate change and actually reduce cost, therefore, proactive financial planning and budgeting practices must be in place to provide contingencies for cyclical shifts.

Several important points need to be emphasized regarding external funding:

- The RTA has no direct control over the level of external funding;
- Except for UMTA Section 9 funds, external funds are sensitive to economic cycles; and
- Reactive responses to external funding changes, such as fare increases, service eliminations and cost cutting, will be required unless proper financial planning to avoid cyclical impacts is followed.

3.4.2 System-Generated Revenue

System-generated revenue is derived almost exclusively from farebox revenue which is totally reliant on ridership and fare levels. Of these two factors, the RTA and Service Boards have influence but not control over ridership, while the Service Boards maintain full fare-setting power. Ridership is influenced by a myriad of factors, which include:

- Demographics,
- Economic cycles,
- Service levels, and
- Fare elasticities.

Demographic changes are not influenced by RTA initiatives — at least in the short-run. While evidence suggests that transit development can affect future land use development, the farebox revenue impacts significantly lag transit system investments. Demographic changes, as described in Section 3.2, have major impacts on overall travel patterns. Service adjustments can be made to influence market share, but without major investments, these result in fairly small changes.

The greatest control over system-generated revenue is through Service Board fare changes. Due to the overall inelastic nature of travel demand for small fare changes (i.e., the percentage of travel drop is approximately one-third of the percentage of fare increases), an increased fare results in greater revenue, though at some sacrifice of ridership.

3.4.3 Operating Costs

Of the three financial elements, the RTA and Service Boards have the greatest degree of control over operating expenses. Costs can be influenced in the short-run by several factors:

- Service levels,
- Labor work rules, and
- Personnel levels.

The level of service provided dictates operating personnel levels given existing operating requirements, i.e., schedules and work rules. Of the elements the system can control, both service and personnel levels can be adjusted in the short-run; changes in modes or technology, however, are generally implemented over a relatively longer time period. Though economic cycles exert general inflationary or recessionary pressure on prices of goods and services, the greatest influence on operating budgets is through manpower costs established through the collective bargaining process.

In principle, the Service Boards have virtually full control over operating expenses. Service and personnel level changes, and cost containment measures can be implemented in both the short- and long-run. Opportunities to reduce operating costs through technology are usually implemented over the longer term since capital investments are required.

3.4.4 RTA Fiscal Management Requirements

Various levels of external funding (sales tax) and cost growth require higher or lower fare increases to meet fiscal requirements (Exhibit 3-24). For example, if costs increase by 5 percent and sales tax revenue grows 4 percent, fares would have to increase by 5 percent to maintain the 50 percent recovery ratio; but a 7 percent increase in fares would be required to balance revenues with expenses. The basic relationship illustrates that in periods of low sales tax growth, fare increases will be required in excess of expense growth to insure that total revenues exceed total costs. If external revenue grows, the need for fare increases diminishes to the level required to cover cost increases

Given these relationships, coupled with the fact that the greatest degree of control is in operating expenses rather than external funding or system-generated revenue, two fiscal imperatives for the RTA are:

- Operating cost containment; and

- The ability to react in advance to economic cycles.

EXHIBIT 3-24
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Example of Annual Fare Growth Rate Increases
for Sales Tax and Cost Growth Levels

SALES TAX GROWTH						
8%	-1% 3%	1% 4%	3% 5%	5% 6%	7% 7%	CF RR
7%	0% 3%	2% 4%	4% 5%	6% 6%	8% 7%	CF RR
6%	1% 3%	3% 4%	5% 5%	7% 6%	9% 7%	CF RR
5%	2% 3%	4% 4%	6% 5%	8% 6%	10% 7%	CF RR
4%	3% 3%	5% 4%	7% 5%	9% 6%	11% 7%	CF RR
COST GROWTH	3%	4%	5%	6%	7%	

CF: REQUIRED TO COVER INSUFFICIENT CASH FLOW

RR: REQUIRED TO MEET RECOVERY RATIO

By controlling operating costs, the need for fare increases and external funding is reduced. Reducing fare increases preserves ridership levels and supports the social goals of transit. Minimizing needs for external funding reduces fiscal hardship during recessionary periods. Further, if either system-generated revenue or external funding exceed 50 percent of operating expenses, an operating surplus is generated.

A fiscally prudent use of this surplus would be to reserve these funds for operating contingencies. Thus, if recessionary cycles reduce anticipated external funding, operating reserves could provide for operating budget relief. Another use of surplus funds would be to fund capital requirements (Exhibit 3-25).

To the extent there are opportunities for cost containment or revenue enchancement, operating surplus can be controlled by the RTA through the budget process. For example, $500 million in system-generated revenue supports a $1.0 billion budget (assuming, of course, that external funds are at least equal to $500 million). Reducing total expenses by 5 percent would produce a $50 million operating surplus. This hypothetical $50 million surplus could be used both as a reserve for operating contingencies and as a reserve for capital.

3.4.5 Issues in External Funding

The RTA's operating funding allocation process (Exhibit 3-26) consists of subtracting revenues from operating expenses to determine an external funding requirement. The maximum level of operating expenses is limited to twice the amount of system-generated revenue. External funding sources are then allocated to the Service Boards in a four-tier cascading process. First to be allocated is the direct formula portion of the retail sales tax. Currently, any surplus after the allocation of these funds is retained by the Service Board given certain conditions related to performance. The next allocation is UMTA Section 9 funds, disbursed by formula based on unlinked passenger trips. Any amount not required by a Service Board can be reallocated to other Service Boards. The third allocation is the State PTF which is distributed based on relative need. Any surplus PTF is then pooled with the RTA's discretionary share of the regional sales tax; these funds are then distributed based on relative need in the final round of allocations. After disbursement of all external funds, a consolidated surplus, or deficit ending balance results. Should there be a deficit, the RTA may use operating reserve funds (if available) to cover the shortfall. Provided a surplus of operating funds is available, the RTA may reserve the surplus for operating contingencies, or allocate the excess to fund capital requirements.

The juxtaposition of existing allocation rules and required system revenue recovery requirements with forecasts of external revenue source levels and

EXHIBIT 3-25
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

RTA Financial Environment
(Uses of Surplus Funds)

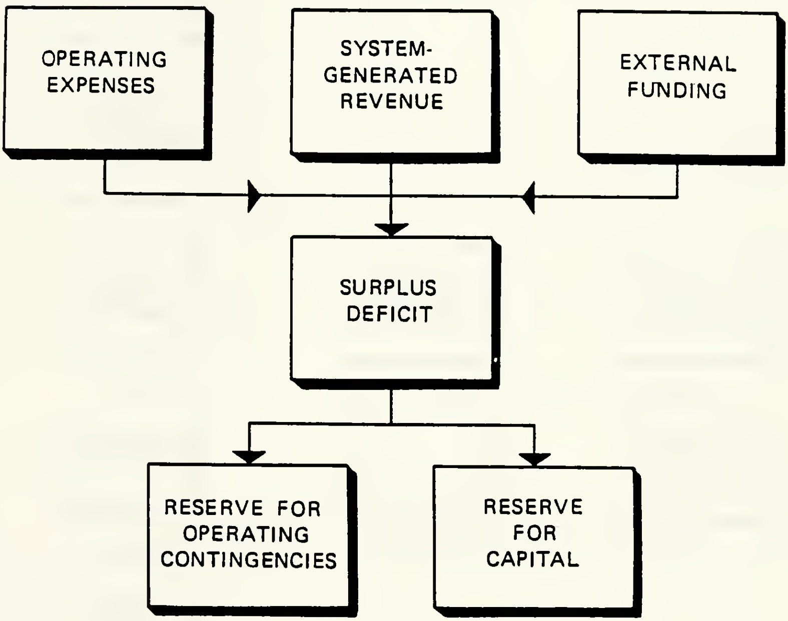
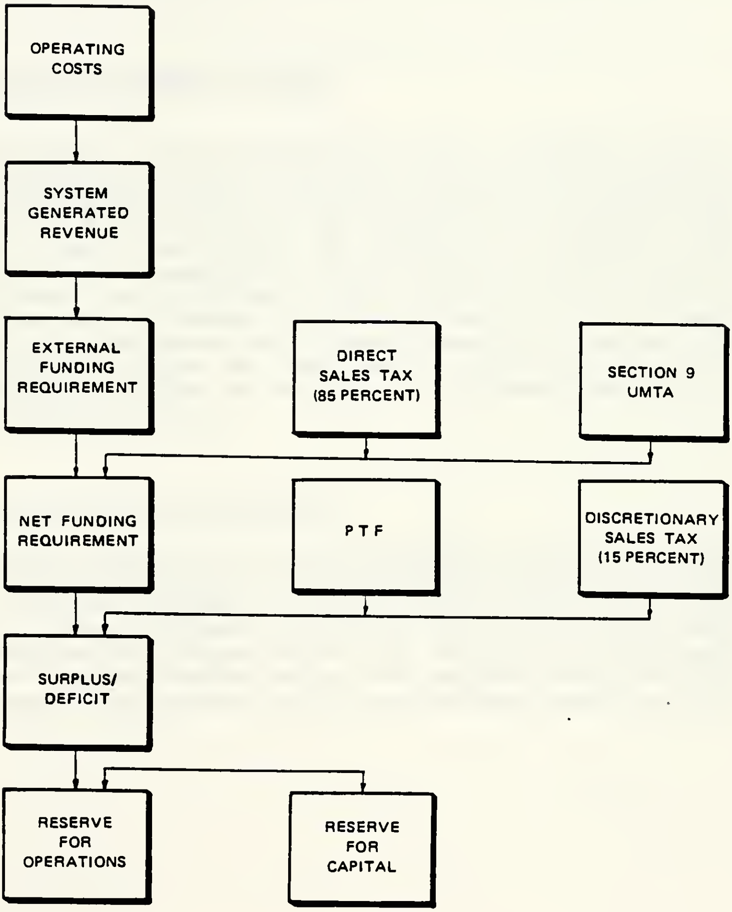


EXHIBIT 3-26
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Overview of RTA Operations Financing Process



historical operating expense growth results in a mismatch between external revenue needs and availability. For example, formula funds would be sufficient to fund 131 percent of Metra's operations with no additional funding required by 2005. On the other hand, formula funds can cover only 56 percent of CTA requirements. Pace's formula requirements cover 168 percent of its need. Therefore, under the current allocation procedures, virtually all of the future discretionary funding would be allocated to CTA, a minor amount to Pace, and none to Metra (Exhibit 3-27). Thus, even if the RTA as a whole is satisfactorily funded into the future (assuming recent cost growth patterns for each Service Board and existing cost growth limitations imposed by existing recovery ratio requirements), the distribution of discretionary external funding by the RTA would, of necessity, be focused on the CTA.

3.5 SUMMARY OF POSSIBLE FUTURES

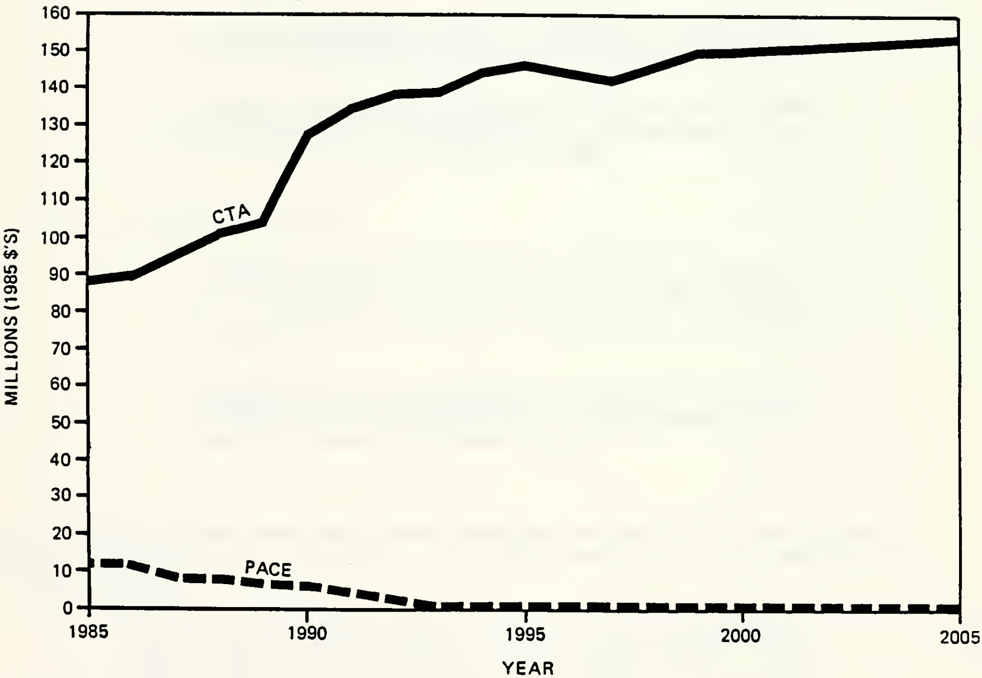
A key component of the strategic planning process is the reliable assessment of future financial performance. In large part, future revenues, expenses and capital requirements will determine the size and scope of the transportation network. It is important to understand, however, that while long-range strategic plans require accurate financial input, the certainty of any financial forecast diminishes greatly as the projection time frame increases. For this reason, three alternative scenarios were developed to reflect possible optimistic, neutral and pessimistic external environments which impinge directly on RTA financial performance and the general well being of public transportation in the region. The scenarios bracket the future with high, low, and middle projections. This "bandwidth" approach permits the development of strategic plans which are responsive to alternative futures.

3.5.1 Overview of Financial Analysis Model

An interactive financial model has been developed, compatible with the RTA five-year budget forecast process, to aid in forecasting financial impacts for these scenarios. The primary advantage of the model is that a wide range of variable inputs can be tested. This results in a clearer understanding of how various financial trends and policy decisions interact. For instance, if inflation increases at a 2 percent compound rate above historic levels, how much would fares have to increase to meet statutory recovery ratios? How much would expenses have to be reduced?

EXHIBIT 3-27
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

External Funding - Discretionary Allocation
1985 - 2005



With input from econometric and demographic forecasts, changes in ridership levels, historic cost trends, anticipated levels of external support and funding allocation policy, the three basic scenarios are defined as:

- Optimistic Scenario

  - Optimistic Demographic Profile - Population increasing to 8.1 million and employment increasing to 4.1 million by 2005 from 1985 levels of 7.3 million and 3.44 million, respectively.

  - Optimistic Sales Revenue Profile - Sales tax revenue (not including PTF) of $594 million (in 1985 dollars) for the Year 2005 versus $342 million in 1985.

- Neutral Scenario

  - Neutral Demographic Profile - Average of optimistic and pessimistic population and employment forecasts.

  - Neutral Sales Revenue Profile - Sales tax revenue (not including PTF) to $566 million (in 1985 dollars) for the Year 2005 versus $342 million for 1985.

- Pessimistic Scenario

  - Pessimistic Demographic Profile - Population increasing to 7.55 million and employment increasing to 3.57 million by 2005 from 1985 levels of 7.3 million and 3.44 million, respectively.

  - Pessimistic Sales Tax Revenues - Sales tax revenue (not including PTF) of $445 million (in 1985 dollars) for the Year 2005 versus $342 million in 1985.

In addition to these basic assumptions regarding external phenomenon defined above, several other key inputs were developed which impact the analysis of financial results:

- External capital funding levels in current dollars are described in Exhibit 3-28. Average capital funding is projected to be $424 million in the optimistic case; $217 million in the neutral case; and under pessimistic conditions, $124 million. Discounting to 1985 dollars, however, reduces funding to $220 million, $112 million, and $64 million, respectively.

EXHIBIT 3-28
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Post-1992 External Capital Funding Levels

	Average Funding After 1992 ($ Millions - Current Dollars)		
	Optimistic	Neutral	Pessimistic
UMTA			
Section 3	$131	$ 69	$ 34
Section 9	143	98	40
Total UMTA	274	167	74
IDOT	50	50	50
Other	100	—	—
RTA	Varies	Varies	Varies
Total without RTA	$424	$217	$124
Discounted from 1992 to 1985 $ (at 5%)	$220	$112	$ 64

- Secular ridership growth rates, defined as the ridership responses to the existing levels of service provided by each Service Board for the different demographic profiles were developed (Exhibit 3-29). These reflect the relative impact on ridership as developed from the sketch planning model, coupled with existing data sources.

- A "cost reduction required" feature (which reduces Service Board expenses automatically, in the model, if the operating expenses exceed the cost limit defined by the fare revenue divided by recovery ratio) has been engaged.

- Capital funds are allocated to each Service Board based on relative need after each Service Board's surpluses from operations are applied to capital needs.

- Recent historical cost growth rates (above inflationary increases) for each Service Board based on recent, stable patterns were used to escalate <u>both</u> operating costs and average fares (in 1985 dollars) on an annual basis (CTA: 2.8 percent; Metra: 3.2 percent; and Pace: 0 percent).

- Elasticities of demand due to fare increases for each Service Board are based on past fare increase history (CTA: -0.24; Metra: -0.22; and Pace: -0.30).

- Recovery rates for each Service Board are constant at 1985 levels (CTA: 51.5 percent; Metra: 52.55 percent; and Pace: 29.69 percent).

Detailed financial results of each scenario are presented in the following sections. In summary, however, no scenario generates sufficient capital funding to continue operating the current system in any reasonable state of repair (Exhibit 3-30).

3.5.2 Results of the Optimistic Scenario Analysis

System-generated revenue (Exhibit 3-31) grows from $450 million in 1985 to $776 million in 2005, a 72 percent increase. Combined system-generated revenue and external funding increases 64 percent from $937 million in 1985 to $1.54 billion in 2005. Operating expenses, based on historic growth, remain below total revenue through the entire period; rising from $901 million to $1.43 billion in

EXHIBIT 3-29
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Secular Ridership Growth Rates
1985 - 2015

	Average Annual Compount Growth Rate per Decade		
	1985 - 1995	1995 - 2005	2005 - 2015
Optimistic			
CTA	-0.04	0.83	0.90
Metra	0.60	1.48	-0.02
Pace	1.33	2.60	0.76
Neutral			
CTA	-0.77	0.33	0.36
Metra	0.02	0.58	-0.18
Pace	0.54	1.40	0.48
Pessimistic			
CTA	-1.58	-0.17	-0.17
Metra	-0.57	-0.33	-0.33
Pace	-0.26	0.19	0.19

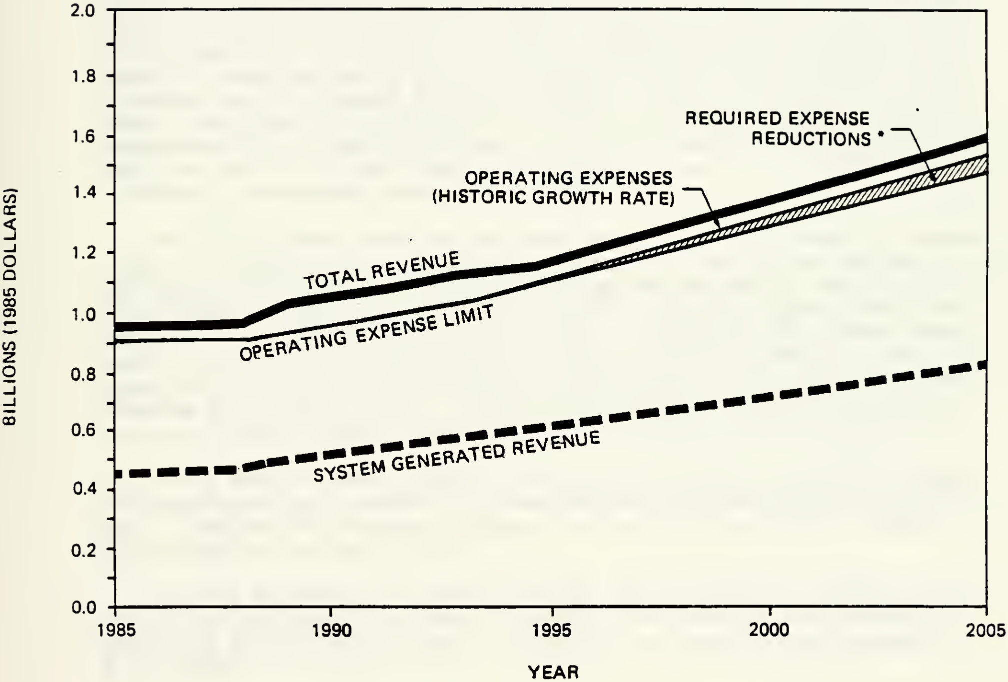
EXHIBIT 3-30
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

RTA Financial Summary
($ Millions - 1985 Dollars)

	Optimistic	Neutral	Pessimistic
First Year of Required Expense Reductions	1994	1991	1990
1995 Expense Reductions	$ 12.0	$ 46.7	$ 80.4
2005 Expense Reductions	20.3	105.9	194.2
1995 Capital Program Balance	-1,639.6	-2,878.1	-3,773.9
2005 Capital Program Balance	-2,524.1	-4,823.3	-6,851.4

EXHIBIT 3-31
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Optimistic Financial Forecast
1985 - 2005



* EXPENSE REDUCTIONS REQUIRED TO ACHIEVE RECOVERY RATIOS

2005. However, expense reductions are triggered in 1994, even though total revenue exceeds cost, to constrain Service Board expenses to their individual expense limits. Forced expense reductions range from $6 million in 1994 to $20 million by 2005. Combining the two contributions to operating surplus (i.e., revenues greater than secular cost growth and required expense reductions triggered by the Service Board recovery ratios, results in surpluses ranging from $40 million in 1985 up to $124 million in 2005.

The capital forecast (Exhibit 3-32) contrasts the capital needs with the contributions to capital funding by sources. Federal funding is projected to fluctuate modestly until 1992 when the effect of discounting the projected $274 million annual Federal contribution into 1985 dollars results in a declining "real" contribution ranging from $198 million in 1992 to $90 million in 2005. The combination of Federal and state dollars displays a similar declining trend, reflecting the discounting of an annual projected state contribution of $50 million; except for the 1987-1991 period, when $15 million is reserved for matching Interstate Transfer Federal funds. The largest single contributor to capital funding in this scenario is the RTA as a result of capitalizing the projected operating surplus. A large increase is shown in 1989 ($173 million), the first year that an operating reserve is released for capital purposes. The RTA contribution (in 1985 dollars) then grows from $94 million in 1990 to $124 million in 2005. The final contribution from an unspecified source provides an additional $100 million per year after 1987 (in current dollars). Discounting this service to constant dollars diminishes its contribution to $33 million in 2005.

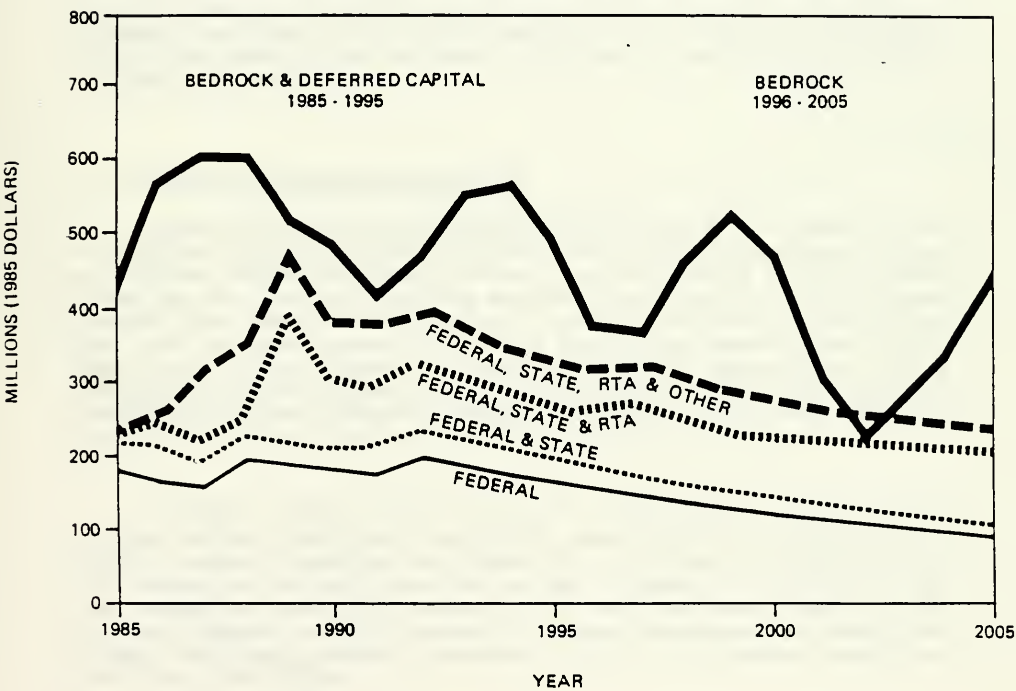
The capital needs profile for the 1985-1995 time frame includes the average annual BIP program need (a three-year average is used in the exhibit) plus one-tenth, assuming a 10-year catchup, of the deferred capital requirement of $2,238 million — assuming that deferred capital needs have higher priority than bedrock needs and are met over the first decade of 1986-1995. The average annual capital cost per year over this 1986-1995 time frame is $527 million per year, with annual BIP requirements averaging $303 million and deferred capital requirements averaging $224 million per year. During the 1996-2005 time period, which does not include any deferred capital costs, capital costs average $382 million per year.

Total capital funding available for the 1986-1995 time period averages $363 million per year in contrast to a total capital requirement of $527 million per year. Therefore, the available funding even under this optimistic scenario is $164 million per year short of need.

For the 1996-2005 time period, average capital funding is projected to be $293 million per year; capital needs (excluding unmet needs in the prior ten year period) are $404 million per year — resulting in an annual average shortfall of $111 million.

EXHIBIT 3-32
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Optimistic Capital Funding Forecast
1985 - 2005



A summary of the flow of capital funds during this 20-year analysis period is as follows:

	(Millions - 1985 $) 1986 - 1995	1996 - 2005
Beginning Balance	-$2,238*	-$1,640
Total 10-Year BIP Requirement	-$3,030	-$3,817
Total Capital Funds	$3,628	$2,933
Ending Capital Balance	-$1,640	-$2,524

* Deferred Capital

Viewed in a capital account balance perspective, the region's beginning capital balance in 1986 is a negative $2,238 million. By 1995, the balance is reduced to negative $1,640 million, but by 2005 it resumes growth to negative $2,524 million. Thus, capital funding is and will remain insufficient to meet the combined annual and deferred capital needs.

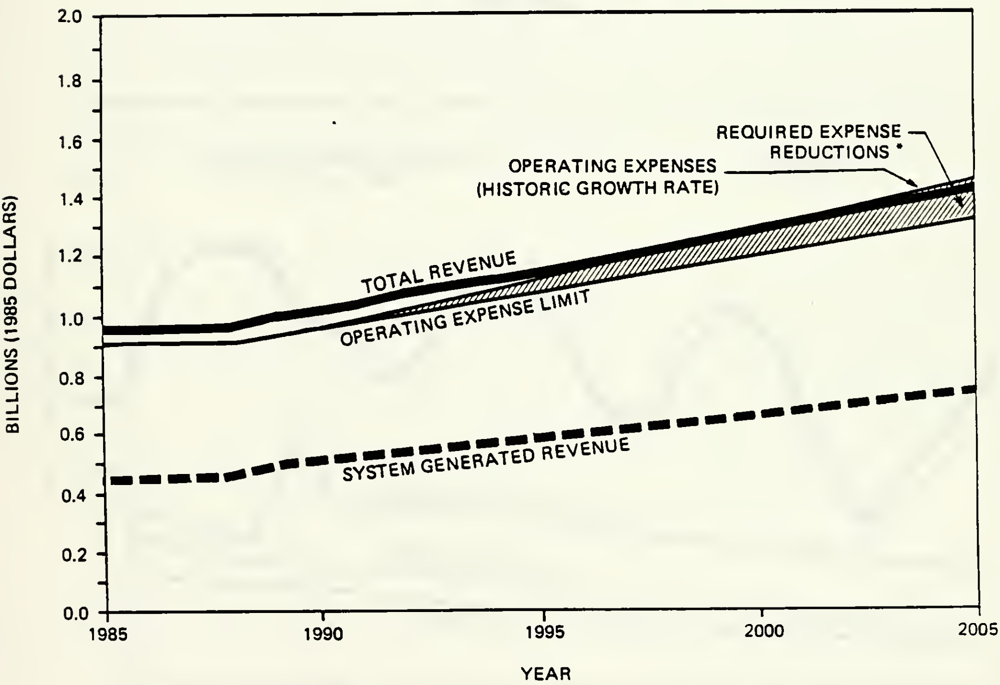
3.5.3 Results of Neutral Scenario Analysis

System-generated revenue (Exhibit 3-33) increases 55 percent, from $450 million in 1985 to $698 million in 2005. Combined system-generated revenue and external funding increases 52 percent from $937 million to $1,425 million during this same period. Operating expenses grow above the Service Boards' expense limits, rising from $901 million in 1985 to $1,434 million by 2005. After year 2004, expenses (projections based on historic real growth rates), slightly exceed total revenue. However, expense reductions are triggered from 1991 to 2005, ranging from $3 million in 1991 to $106 million by 2005. These reductions contribute to produce operating surpluses through the entire period. Operating surpluses generated by these reductions range from $40 to $97 million.

The capital forecast (Exhibit 3-34) for the neutral scenario displays a greater variance between funding and requirements than the optimistic scenario. The primary elements producing this change are a reduction of UMTA funds to $167 million per year (not discounted) and the elimination of a $100 million per year unspecified contribution assumed in the optimistic case. Similar to the optimistic scenario, the RTA becomes the largest contributor to capital funds through capitalizing operating surpluses. The RTA contribution ranges from $38 million to $97 million.

EXHIBIT 3-33
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

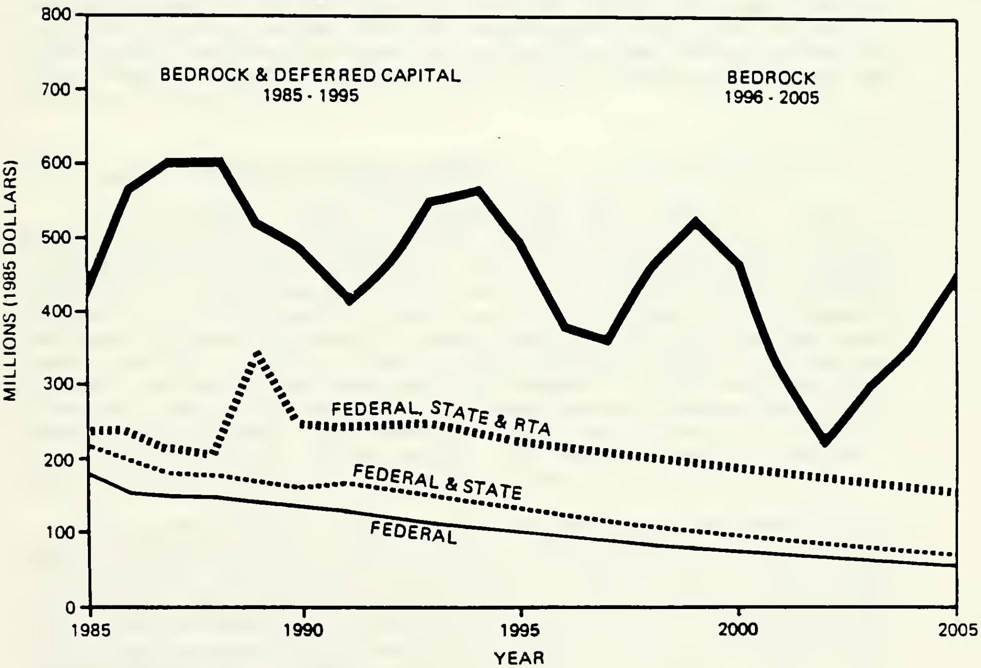
Neutral Financial Forecast
1985 - 2005



* EXPENSE REDUCTIONS REQUIRED TO ACHIEVE RECOVERY RATIOS

EXHIBIT 3-34
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Neutral Capital Funding Forecast
1985 - 2005



The capital funds flow for this scenario is as follows:

	(Millions - 1985 $) 1986 - 1995	1996 - 2005
Beginning Balance	-$2,238*	-$2,878
Total 10-Year BIP Requirement	-$3,030	-$3,817
Total Capital Funds	$2,390	$1,872
Ending Capital Balance	-$2,878	-$4,823

* Deferred Capital

Based on a beginning balance of $2,238 million, BIP requirements of $3,030 million and total available funds of $2,390 million from 1986 to 1995, unfunded capital needs by the end of 1995 will total $2,878 million. Carrying this unmet need into the second decade, coupled with BIP requirements from 1996 to 2005 of $3,817 million, total capital requirements are $6,695 million. With projected total capital funding during this period of $1,872 million, unfunded capital needs will total $4,823 million by 2005.

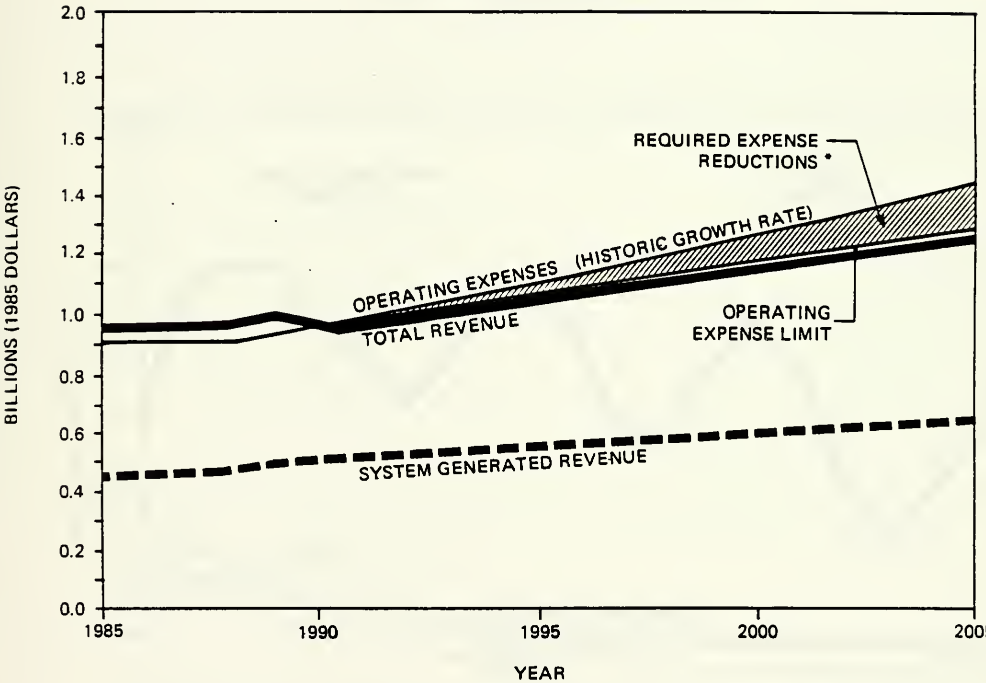
3.5.4 Results of Pessimistic Scenario Analysis

System-generated revenue increases from $450 million in 1985 to $620 million in 2005 — a 38 percent increase (Exhibit 3-35). Combined system-generated revenue and external revenue increase only 26 percent during the analysis period, due primarily to lower sales tax revenue growth, the gradual elimination of UMTA Section 9 funds, and lower ridership growth. Expenses significantly outpace the growth in system generated revenue during the period, growing from $901 million in 1985 to $1,434 million in 2005 — a 59 percent increase. Required expense reductions are triggered in 1990, and range from $2 million in 1990 to $194 million in 2005. Despite dramatic expense reductions to achieve recovery ratios, slight operating deficits result from 1992 to 2005 — ranging from $4 million to $63 million. (Of course, under the legislative requirements and RTA financial management procedures, this would not occur).

The capital forecast (Exhibit 3-36) indicates severe shortfalls. Annual funding during the first ten years averages $149 million per year. Requirements of $527 million per year produce an annual unmet need of $378 million. Annual capital funding from 1996 to 2005 declines further to $74 million per year; annual requirements (excluding the unmet need of the prior ten years) are $382 million per year, producing an annual unmet need of $308 million per year. As detailed in the previous exhibit, due to slight operating surpluses and deficits, RTA's capital funding contributions are negligible.

EXHIBIT 3-35
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

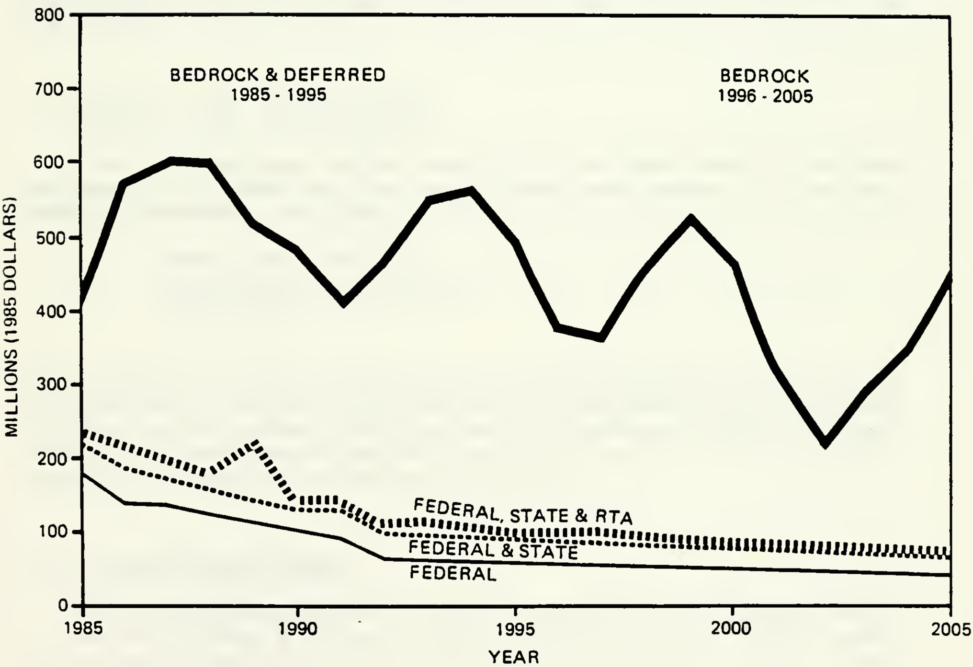
Pessimistic Financial Forecast
1985 - 2005



* EXPENSE REDUCTIONS REQUIRED TO ACHIEVE RECOVERY RATIOS

EXHIBIT 3-36
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Pessimistic Capital Funding Forecast
1985 - 2005



Summarizing the capital flows of the 20-year period:

	(Millions - 1985 $) 1986 - 1995	1996 - 2005
Beginning Balance	-$2,238*	-$3,774
Total 10-Year BIP Requirement	-$3,030	-$3,817
Total Capital Funds	$1,494	$ 740
Ending Capital Balance	-$3,774	-$6,851

* Deferred Capital

As a result of lower Federal and RTA support, by the end of 1995, total unfunded capital needs will be $3,774 million. Available funding decreases further in the 1996-2005 time period, resulting in capital unmet needs of $6,851 million by the end of 2005.

3.6 THREATS AND OPPORTUNITIES

The threats and opportunities facing the RTA are clearly shown in the above discussion of future scenarios. The focus of strategy development is on these most significant challenges to the RTA:

- External capital funding;
- External operating funding; and
- Market Shifts.

The analysis of the future scenarios and their impacts on the RTA clearly shows that a strategy, and associated policies, plans and management actions are needed to respond to these external funding and market share issues. Defining a strategy to respond to these issues is the priority activity of the RTA if it is to meet its mandate for coordination and financing of the RTA.

3.6.1 External Capital Funding

The most significant threat to the RTA's fiscal health and its physical ability to continue operations is the lack of sufficient capital funding. Current funding has averaged approximately $233 million per year for the last six years, while average annual capital needs simply for replacing and rehabilitating existing track, structure, rolling stock, facilities and equipment will require $375 million per year. The backlog of capital expenditures that should have been made but have not — the deferred capital balance — currently stands at $2.24 billion. As annual capital needs are not met with capital funds, this deferred capital figure will continue to grow.

Under-capitalization threatens the RTA and the region in several ways. Obsolescence of assets — whether track, structure, rolling stock, electrical, signals, or other major components of the integrated system required to provide transportation services — will lead to reduced service quality in terms of availability of service, reliability of service, comfort of service and increased operating costs. Deferred capital replacement is a significant deterrent to operating productivity which not only will raise operating costs and impact the operating financial picture, but reduce morale for both operating personnel and transit users. Quality, reliable service will be increasingly important toward maintaining market share; and under-capitalization therefore threatens to create erosion in ridership and system-generated revenues. Longer term reduced public transportation quality to downtown Chicago could stimulate the suburban trends that have accelerated in the last decade.

Although the system is not unsafe at the present time, issues of safety will become prevalent if the system continues to be under-capitalized. Services may need to be significantly curtailed to protect the riding public. As safety and quality of service erodes, the allocation of scarce resources is <u>not</u> made to achieve productivity gains, to reduce operating cost savings to improve service, to protect market share, or to initiate new service to tap new markets — rather, the resources are allocated to avoid severe problems. The flexibility and initiative to make investments of enduring value to the system as a whole is essentially preempted by emergency investments to keep the system going.

3.6.2 External Operating Funding

External operating funding was augmented in 1983 with the addition of the 25 percent direct sales tax state matching funds. Coupled with the direct sales tax funding, these funds provide an inflation sensitive operating fund source — $427 million in 1985. This state and local funding, while it may be insufficient in the long-run, is particularly fortunate, as federal operating assistance of $58 million could potentially disappear.

The balance between system-generated revenues (predominantly fares) and external source funding for operations was established in the 1983 legislation at 50 percent. With the 50 percent limitation, the Service Boards will face the continuing challenge of balancing fare increases with cost control to maintain a recovery ratio as stipulated in the RTA's amended legislation. To the extent that system-generated revenues that exceed budgets defined by the recovery ratio targets can be used to supplement limited capital dollars, the Service Boards will have an additional impetus to contain costs in addition to the incentive of maintaining reasonable fare levels. Therefore, given the existing level of external operating funding (and the distinct possibility that UMTA funds will disappear), the containment of costs is a key to the future of each Service Board.

Cost containment is an opportunity in several ways. First, transit fares can remain relatively stable allowing for improved competitive advantages over other modes. Second, any surplus converted to capital funding provides relief, even if minor, to the capital funding shortfalls.

Cost growth is a threat if uncontrolled, primarily due to the requirement to continually raise fares, thereby rekindling the downward spiral of reduced ridership and service leading to greater fares (the classic transit doom-loop). The lost opportunity of capitalizing operational surpluses is also a considerable threat to each Service Board.

While each Service Board will look to meet cost containment objectives in different ways, a preferred way is to perform the same services at reduced cost, as opposed to reducing services. Reducing unit costs usually is accomplished through labor productivity improvements, labor cost reductions per unit of work, or reduction in non-labor costs such as fuel, electricity, etc.

Ironically, the option of capital substitution for labor through increased automation is a lost opportunity in an environment of capital shortage. There simply is not sufficient funding to replace old equipment or add new equipment that affords operating cost savings — either from labor savings or utility costs. The lack of capital funding actually will reduce operational efficiency and increase unit costs due to increased maintenance costs and higher energy and operator costs.

Unit costs can also be reduced by changing work rules and labor rates. Never an easy or popular option because of the disharmony and contention it causes, this option must be seriously considered, particularly in light of union concessions in other components of the transportation industry — most notably the airlines. Labor costs, if not reduced within the labor-management framework, can potentially be reduced through opening service operation to the private sector where competitive fares will tend to increase the incentives for labor cost control.

The remaining options consist principally of service eliminations or change in the nature of the service provided. Under-utilized services are clearly candidates for service reduction in terms of service frequency or hour of the day that service is provided. Service substitutions of lower cost modes with lower levels of service may also be possible.

All of these options are not presumptive, but suggestive; each Service Board will have to make decisions on strategies and tactics to cut operating costs as appropriate to their situations. The RTA will need to create the incentives to encourage Service Board cost containment.

3.6.3 Market Share and Regional Development

Public transportation is economically effective where the density of trip origins and/or destinations provides sufficient market potential, and the proximity

of this density is near rail or bus lines that can be used to serve greater numbers of people at a lower cost per passenger. Without the demand density, the economies of multiple occupant vehicles are not available — leading inevitably to higher fares, reduced service, and eventually to non-competitive service. The synergism between cost-effective transit service and density is most evident in travel to the downtown Chicago area. The destination volumes and densities are attractive for the provision of service, and the level of service (including travel cost to the rider and travel time) is significant enough to create market penetration of as high as 80 percent for suburban to downtown services — part of the "traditional" market cluster that is a cornerstone for public transportation demand.

Suburban patterns of growth and development — part of the growth market cluster — create market competitiveness problems to transit in several ways. First, the dispersion of trip origins and destinations over larger areas results from lower density. Serving these lower density areas with frequent service is very expensive, particularly when competing with automobiles as an alternative. For the traveler who has a choice between automobile or transit service for suburban service, the choice is clear — transit typically captures less than 3 percent of suburban-to-suburban, or growth, markets. Users of suburban service are typically those who do not have an automobile available to them, whether due to economic, age or other reasons. They are therefore captive to transit.

Significant, however, is the growing level of suburban automobile congestion that is resulting from suburban development, automobile usage and relatively inadequate increases in highway capacity to meet burgeoning automobile demand. The travel time advantage of automobile over transit service is narrowing. Also, the costs of highway construction and maintenance are becoming a significant financial burden to the state and counties. Many jurisdictions across the United States are beginning to believe that it is impossible to build their way out of congestion problems.

Opportunities for new suburban service on exclusive rights-of-way (to avoid the congestion delays or automobile travel) are therefore increasingly appealing to both travelers faced with congestion, delays and parking problems, and to transportation officials faced with mounting highway capital and maintenance costs. The required ingredient to penetrate the growth market and make suburban services more economically attractive from an RTA investment viewpoint is density and the market concentration that will improve the potential for market penetration. Contribution from local communities and the private sector (developers and existing land owners) in terms of both financial resources and land use organization will be important to tapping the suburban potential for transit. Financial resources are obviously important because of reduced levels of capital dollars already available. Land use planning to permit density in close proximity to stations and other transportatin nodes will be needed to increase accessibility to transit by larger volumes of users. Privately supported shuttle operations to support suburban stations can also be a key ingredient to a successful suburban transit system.

Market opportunities also exist in downtown Chicago: the CBD circulator market. Significant development will occur on the "edges" of downtown and, in fact, has already occurred in the near north of downtown — in areas that are less accessible to the downtown commuter rail stations and rapid transit system. Investigations of how to connect these new growth areas with the existing transit service have already been pursued, but significant changes have yet to be made. Again the public-private partnership approach to new or expanded facilities, such as transportation centers, could be an answer to funding shortfalls by the RTA and needed accessibility by developing areas. New developments require infrastructure additions with respect to parking and street connections. There is growing sentiment and practice to require developer contributions for improving or adding to the transit infrastructure as well. Examples of transit-oriented development initiatives at a minimum include transit stations and employee/business transit pass cost sharing arrangements comparable to employer paid parking and free or subsidized shopper parking.

Development of an added downtown circulation system to capitalize on new development may be considered not only as an opportunity, but as an imperative to avoid market loss to the automobile for downtown access. The market competition between automobile and commuter rail, in particular, has been as noted previously by the loss of market share to the automobile during the 1981-1982 fiscal crisis when rail service was reduced and fares substantially increased.

3.7 GENERIC STRATEGIC CONCEPTS

To meet the challenges facing the RTA, a range of generic strategic concepts exist that are consistent with the RTA's responsibility for financial oversight, the flexibility required to accommodate both Service Board prerogatives and the range of possible future environments, and realistic in terms of actions that can be undertaken by the RTA. The RTA's financial responsibility requires that future actions be conducted in financial terms. Strategic initiatives extend into the Service Board responsibility areas and provide alternative paths for effecting change toward each objective.

There are three preliminary long-range strategic objectives within the direct control of the RTA and Service Boards which can be used in determining future direction and in setting priorities for the public transportation system of Northeastern Illinois:

- Equalize capital needs with capital funding availability;
- Restrain operating cost increases at or below operating funding availability; and
- Increase system revenue while responding to changing demographic patterns.

Initiatives have been developed for these strategic objectives to connect each objective with feasible methods for future attainment.

The shortfall of capital funding to support the existing or baseline capital asset inventory is a challenge to the future of public transportation in Northeastern Illinois. Strategic initiatives to close this shoftfall may include:

- Reducing capital funding requirements through extending the typical life cycles of capital plant and equipment;
- Modifying service levels to lessen capital needs by reducing or eliminating parallel services in each corridor, increasing the effectiveness of service, or by finally eliminating capital intensive services, if necessary;
- Increasing capital funding support through development of new dedicated funding sources for capital replacement;
- Creating and directing operating surplus to capital by increasing the recovery ratios and then diverting these surplus funds to cover the capital shortfall;
- Selectively expanding service into growth areas if dedicated capital funds become available, or if investments in underutilized capital assets are eliminated, to provide funding for specific high growth corridors; and
- Investing resources in a limited, cornerstone network that will provide a basic level of service for the region in the corridors and areas of highest existing and emerging usage.

As described in the next chapter, the long-range investment strategy is focused on preserving and protecting a cornerstone network for the RTA through the Cornerstone Program. Also, alternatives for initiating new services and improving existing services through technology infusion are included in the New Initiatives Program and the New Technology Program, respectively. Funding for these strategies will continue to be a problem and will need to be solved through one or more of these generic strategies.

Operating cost increases greater than inflation threaten the financial stability of the RTA and the legislative mandate for cost recovery. Strategic initiatives to restrain these cost increases may include:

- Increasing labor productivity by modifying current service delivery methods to reduce the manpower requirements for service;

- Containing labor cost increases by limiting wage and benefit increases and using less costly labor where feasible;

- Decreasing non-labor related cost increases by reducing purchasing and inventory costs, and reducing power costs;

- Reducing peaking characteristics by diverting travel to the off-peak periods through pricing and service level incentives; and

- Adjusting service delivery through substitution with more cost-effective services.

Cost containment and increased productivity are the basis for the market-oriented operating strategies described in Chapter 4. These operating strategies are the foundation for the investment program.

Increasing system revenue in the face of increased suburbanization is a challenge to maintaining the legislated recovery ratio. Strategic initiatives to increase system revenue may include:

- Improving revenue control methods to increase the efficiency of revenue collection, decrease costs of such, and limit any potential for revenue loss;

- Increasing prepayment market penetration to increase ridership while decreasing the cost of revenue collection;

- Increasing auto travel premiums by working collectively with major development centers to improve the competitiveness of transit;

- Modifying pricing structure through appropriate fare premium increases, fare structure adjustments and coordinated plans for inflationary fare increases;

- Increasing other system-generated revenue through an aggressive joint development program and increased advertising and concession revenues to reduce the pressures on passenger fare increases; and

- Experimenting with new service types such as paratransit and van pools in suburban growth markets to provide improved service levels for reduced overall costs.

These generic concepts and their applicability as long-term strategies and investment plans are the subject of Chapter 4, Long-Range Strategies and Investment Plans. In particular, these concepts are explored in terms of both operating strategies and investment strategies given the nature of the regional travel markets and the ability to serve these markets with existing services.

4. LONG-RANGE STRATEGIES

AND

INVESTMENT PLANS

4. LONG-RANGE STRATEGIES AND INVESTMENT PLANS

The development of strategies for the long-run future of transit in the Chicago region is founded on the existing and future marketplace, the possible operating options for the optimum level of transit service in these markets, and the appropriate investments needed to support these strategies — all couched in an understanding of the vagaries of the future and the financial realities of managing transit in the institutional setting of the RTA.

The first section of this chapter examines transit market segment clusters. Market objectives and associated operating strategies are defined for each cluster.

These objectives and operational strategies are converted in the next section of the chapter into three fundamental investment programs:

- Cornerstone service program;
- New Initiatives Program; and
- New Technology Program.

The objectives of each program and the program concepts relevant to each Service Board are also described.

The third section describes the financing of the investment programs. The impact of the capital funding shortfall is described; existing operational funding procedures and emerging imbalances discussed; and opportunities for capital contributions from operating surpluses reviewed. Finally, a number of funding sources and yields are provided as options to be considered for new funding.

The last section of this chapter describes priority actions needed on both the operations and investment front to initiate the overall strategy. These priorities are focused on actions to support the strategic plan under current and possible future funding conditions.

4.1 OPERATING STRATEGIES

The five market clusters described in the travel market analysis all have unique service needs — now and in the future. Operating strategies are presented in this section to meet these travel needs with consideration toward current transit facilities and service levels and how these may be focused to meet future challenges of each market cluster.

Strategic focus is provided by an overall understanding of the travel marketplace and the changing opportunities to capture demand and market penetration that will be available in the future. As described in the previous chapter, the market logically subdivides into five basic clusters which have unique characteristics and differing potential for contributions to the regional transit market share.

These patterns of demand and market penetration are summarized in Exhibit 4-1, followed by the basic thrusts for each market cluster. The traditional CBD-oriented market is the most important to transit since it represents the highest market penetration and largest proportion of the transit market — over half in any scenario. The base strategies of protect, promote and prune are intended to maintain this market while serving it at costs commensurate with growth opportunities. The second largest market cluster, traditional City-oriented, is a more dispersed market, which requires a rationalization of service and reorganization of submarket focus to retain market share. The growth market needs to have its specific patterns better established with alternative ways of providing service refined through experimentation. The stable market is a disappointment in terms of current market share. This market cluster is the largest in total travel volume, is heavily served by existing facilities, yet has a low market penetration. Base strategies are to consolidate, coordinate and extend to take advantage of existing facilities and gain further entry into this largest total marketplace. Further detail on each of these base strategies is presented in the following sections with perspective on their relationship to specific operating and investment strategies.

4.1.1 Traditional Central Business District-Oriented Market Market Cluster Operating Strategies: Protect, Prune, Promote

Total travel from all market segments to the Chicago CBD increases above 1985 levels under all scenarios. This growth is very important since transit travel to the CBD represents the largest proportion of total transit travel — over 50 percent in all scenarios — and shares are already the highest of any market. Market shares are not markedly affected by network changes (expansion or retrenchment) indicating that the basic transit infrastructure in place (even with the potential for some financially driven pruning) is capable of handling a high growth future, and further transit facility investments in new facilities are unnecessary to serve the line-haul portion of these CBD trips, while in a low growth, financially constrained future, opportunities may be available to prune the network with only minor market share loss. The key to share growth is to capitalize on the increasing auto congestion levels, particularly in the high growth scenario.

This high-share market is and will be the backbone of transit and requires protection from diversion to other alternatives. Protection and enhancement of this market requires improved access to commuter and rapid rail stations including increased parking capacity, a better egress system such as a downtown distributor, an improved quality and speed of line-haul service on all modes (especially

EXHIBIT 4-1

RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Market Cluster Strategic Focus

Market Cluster	Transit Market Share (%)			Market Growth (%)		Transit Volume Contribution (%)			Base Strategies
	1985	Opt	Pess	Opt	Pess	1985	Opt	Pess	
Traditional CBD	68	68	58	23	6	54	53	57	Protect, Promote, Prune
Traditional City	30	32	26	9	-15	30	27	25	Rationalize, Reorganize, Maintain
Growth	5	6	5	88	59	3	6	5	Establish, Experiment
Stable	7	7	5	16	-2	12	13	11	Consolidate, Coordinate, Extend
CBD Circulator	50	50	50	146	83	1	1	2	Restore, Renew, Extend

express), and increased quality of service to all modes serving this market cluster. Rapid and commuter rail lines should be the focus for serving this market cluster since they already have separate rights-of-way for higher travel speeds, lower incremental costs in high volume corridors, and represent a significant existing capital investment. However, the replacement needs to keep the entire network operating represent investment levels that exceed the current capital funding capacity of the RTA. Selected pruning of the more lightly used corridors and smaller market areas may have to be considered to maintain or increase market share by selectively focusing investments in the corridors that are the strongest performers and/or display the largest growth opportunities in this overall major market cluster.

4.1.2 Traditional City-Oriented Market
Market Cluster Operating Strategies: Rationalize, Reorganize, Maintain

This is the second strongest market cluster for transit, with a current transit share of over 30 percent. Total travel varies from a 10 percent increase to a 15 percent decrease, depending on the demographic outlook. Thus, this market cluster is the largest downside "swing" risk in terms of potential transit volume due to demographic change rates. This demographic change also varies widely among individual areas. Transit share reacts positively to the transit network expansion (a 2.5 percentage point increase in mode split), while only a minimal drop in share is associated with the retrenchment network in the pessimistic scenario.

Operating strategies for this cluster should involve re-orienting services to appropriate levels with an eye toward minimizing the inconvenience of a transit transfer. Most transit trips in this cluster require at least one transfer to complete each trip, therefore, facilitating the transfer is an important consideration to maintaining and/or improving this market penetration. Outer suburban trip origins need better access (additional parking and feeder bus) to commuter and rapid rail stations and better transfer connections to rapid rail and bus services from in-City stations. City trip origins and destinations would benefit from improved bus to rapid rail transfer facilities and an overall rationalization of bus service based on market needs. There is a wide variance in bus service utilization and a repetition of line-haul functions with rapid rail in certain portions of the City. Citywide bus services need to be reorganized to focus on specific submarket areas, and then rationalized to more closely match service levels with travel needs; thus, maintaining market share while controlling operating costs.

4.1.3 Growth Market
Market Cluster Operating Strategies: Establish, Experiment

This market cluster presently has the lowest transit share of the five clusters, but also represents the highest growth opportunity. Market growth rate is dependent on suburban growth in both population and employment, but is projected

to significantly increase under both optimistic and pessimistic scenarios. Traditional transit services have not penetrated this market very well, particularly for the choice rider, due to the fixed-route structure of most services and the dispersion and low density of the marketplace. Growth will solve some of the dispersion problem, but density levels will not increase significantly. Traditional bus transit service will need better focus, and new transit concepts, such as considerable expansion of paratransit, will be needed for the lower density, dispersed markets.

Paratransit options are a better match with the growth market needs and size. Paratransit circulation within defined market areas with connections and coordination to centralized transit nodes provides an operating solution that increases overall transit service accessibility while reducing operating costs below fixed-route or other service options with equal coverage. Transit nodes would connect local service areas with line-haul service — express bus, commuter rail, and potentially, exclusive right-of-way express bus or light rail links — to other local service areas. This approach toward serving a dispersed origin to a dispersed destination market will improve service, market penetration, and lower cost per unit of service in contrast with traditional service structures.

The emphasis should be to establish this transportation node-focused service structure in selected suburban centers with an existing transit service base and strong growth expectations. Alternative delivery system concepts will need to be explored through experimental and demonstration efforts to establish suitable operational and management approaches to ownership and service delivery. All types of operational, management and ownership concepts, including brokering, privatization, van pooling, and various incentive contracting techniques, will need to be considered. However, specific experiments will need to be carefully planned and controlled with financial, service and ridership objectives pre-established along with performance timetables. Experimentation is necessary to avoid building constituent pressures to maintain an uneconomical service.

4.1.4 Stable Market
Market Cluster Operating Strategies: Consolidate, Coordinate, Extend

This cluster represents the largest existing and future total travel market under all future scenarios, yet it has a small transit share. Market penetration in the inner suburban areas should be higher considering the extent of rail and bus services throughout the area. The low market share indicates that services are not adequately oriented along travel desire lines. Based on a projected stable travel market and a trip orientation of many origins to many destinations, service should be focused on transportation centers of the existing high capacity radial rail services, but with improved, high speed circumferential links. Fixed-route feeder services to rail stations are important in the inner suburbs to support greater trip

concentrations. With increased levels and dispersion of tripmaking, improved coordination for suburban-to-City travel and high speed circumferential links to tap new trip patterns will help increase market share.

Distribution services to nearby employment concentrations and connections to other transit centers are also important steps toward building a confederation of individual suburban services into a cohesive regional system network. Inter-transit center connections should focus on high speed, high quality express or limited-stop service. Selective introduction of busway or light rail service should be considered for inner suburban circumferential service, but extensive circumferential network expansion should be performed in a sequential and controlled manner.

The operating strategies for the market cluster are focused on the consolidation of existing transit services and resources to better penetrate markets which are large and available, but currently served in a disjointed fashion. Coordination among suburban bus operators is essential to initiate the concept, in addition to introduction of higher quality circumferential services and coordination with City-oriented bus and rail services. As this approach becomes accepted into the marketplace, it should be extended into the more dispersed areas of the inner suburbs to increase market area coverage and travel opportunities.

4.1.5 Central Business District Circulation Market
Market Cluster Operating Strategies: Restore, Renew, Expand

This market cluster includes only those trips with both origin and destination in the downtown area, however, services provided would have the added purpose of carrying travelers from outside downtown with destinations not proximate to rail stations. As the Central Business District expands in size and area, trips within this market cluster increase rapidly. Residential concentrations within this CBD area and the expansion of the mid-day business travel market are expected to substantially increase travel demand. Most of this travel need is currently served by local bus routes and the rapid rail network to some extent. The projected growth of this market, combined with the external travel to the CBD, will increase on-street congestion (already close to grid-lock) making local bus service a very slow option. The rapid rail network will continue to serve a portion of this travel need, but does not effectively serve east-west trips especially from the commuter rail terminals. A downtown distributor with a dedicated right-of-way will be necessary to maintain the CBD market share, continue growth into the future, and serve the expanding central area. In addition, direct access from the existing rapid rail stations to all newly constructed developments is an important transit advantage for all CBD destinations. The downtown distributor should be designed

for layout, and grade and station locations, so that new construction can include direct access to this system upon development.

* * * * *

These market-focused operating strategies (which are converted to more specific options in the next section) will serve the current and future travel needs of the region in a more cost-effective manner. The strategies proffered for transit operations within the region are focused toward concentrating resources in each market, orienting services to better serve and penetrate the larger markets and, in total, enhancing overall service to the region while improving financial performance.

4.2 INVESTMENT STRATEGIES

Achieving the operational strategies requires focused effort in terms of both operations management and capital investment. Overall investment strategy is defined in three programs:

- Cornerstone Program,
- New Initiatives Program, and
- New Technology Program.

The relationship of these investment programs to each Service Board and to the operating strategies described above is summarized in Exhibit 4-2.

The concept of the Cornerstone Program is not to recommend that "weaker" facilities be eliminated now but to recognize the mismatch between available and required funds and develop a strategy to deal with uncertainty. More precisely, the short-run outlook is less foreboding than the long-term. The Federal government may be withdrawing but that is less of a threat in the near-term. Techniques may be available to aid short-range capital needs (e.g., bonding the external revenue stream). The second five to fifteen years need contingent planning. Therefore, the cornerstone concept invests more heavily in elements of the system that are currently strong and/or have highest growth or market share potential and takes an opportunistic approach to the weaker elements making no "irreversible" investments while the longer-term future (financial and demographic) is unfolding.

The New Initiatives Program is oriented primarily to service experimentation. New services designed to increase market share or reduce cost are required in different markets, but particularly in the "growth" markets served by Pace. Initiation of new services requires flexibility to experiment with different service types and concepts. This program is designed to reduce the risk associated with experimentation by including in new initiatives projects the costs associated with equipment, operations, marketing and management of new services for time periods of up to two years.

EXHIBIT 4-2
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Strategic Plan Overview:
Market, Operating and Investment Strategies

Market Cluster	Basic Operating Strategy	Service Board Responsibility			Investment Program Focus		
		CTA	Metra	Pace	Cornerstone	New Initiatives	New Technology
Traditional-CBD	Protect, Promote Prune	●	●	◔	●	○	◒
Traditional-City	Rationalize, Reorganize, Maintain	●	○	○	●	○	◒
Growth	Establish, Experiment	○	○	●	◒	●	○
Stable	Consolidate, Coordinate, Extend	●	○	●	◒	●	◒
CBD-Circulator	Restore, Renew, Extend	●	◒	○	●	○	○

The New Technology Program is focused on the incorporation of new technology — from fare collection equipment to robotics applications in vehicle maintenance — to the provision of transit service. Under the right circumstances, technological infusion into the transit environment can lower costs, improve reliability and improve overall performance.

A summary of the strategic investment thrusts by program type and Service Board highlights the direction of each program (Exhibit 4-3). The Cornerstone Program is associated with investments to preserve and protect the most important elements of the RTA system. The New Initiatives Program provides funding for service experimentation and development. The New Technology Program is focused on cost savings and performance gains through selected applications in automation. Each of these programs is described in more depth below.

4.2.1 Cornerstone Program

This program is focused on those elements of operating strategy related to the existing transit system infrastructure. Elements of the program include priority investments in accelerated replacement and rehabilitation of those portions of the system that are and will continue to be the cornerstone for the future. This may be considered the "protect-at-all-cost" network. The basic premise behind this program is to prioritize capital investments to promote and protect markets that are:

- Most cost-effective in terms of ridership volumes produced (now and in the future) for the operating and capital cost dollars invested;
- Most promising for the future stability and growth of the RTA's regional system; and
- Most productive in use of increasingly scarce capital funds.

By design, the Cornerstone Program excludes from major capital investment those elements of the existing regional service that become less relevant to the future of a healthy, revitalized system in order to provide sufficient funding to accelerate improvements on system elements that are important to the future of the regional system — the cornerstone system. The cornerstone system is where the priority investments should be made.

The objectives of the Cornerstone Program are to:

- Improve Operational Performance - Increased service levels, particularly operating speeds and reliability, at reduced operating costs
- Improve Operating Efficiency - Decrease operating costs for existing or improved levels of service

EXHIBIT 4-3
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Summary of Investment Strategies

PROGRAM	CTA	METRA	PACE
* CORNERSTONE	. Designate Network . Accelerate Station Rehab . Rehab Structures . Revamp Maintenance . Replace Rolling Stock . Change Bus Service	. Designate Network . Consolidate Operations . Rehab/Expand Stations . Rehab Structures . Improve Fare Collection . Replace Signals/Comm. . Rehab Yards & Shops . Replace Rolling Stock	. Revamp Service . Create Transit Centers . Service Monitoring Systems . Expand Paratransit . Replace Rolling Stock
* New Initiatives	. Productivity Improvement . Study South Lake Shore	. Expand Consolidation . Expedite Downtown Distributor . Revamp CBD Service . Pace Coordination . Station Relocations	. Expand Transit Centers . Experiment with Circumferential . Implement Paratransit Demos . Study LRT/HOV Corridors . Feed Metra
* Technology	. Automated Fare Collection . Maintenance Automation . One-Person Operations . Telecommunications Leases	. Light Rail Diesel . Automated Fare Collection . Honor Fares . Maintenance Automation	. Automatic Vehicle Monitoring . Rte Deviation Systems . New-Tech Vehicles . Maintenance Automation

- Increase Passenger Amenities - Increase the quality of the passenger's travel experience through improved stations, transfer locations, and shelters

- Accelerate Structure and Facility Replacement and Rehabilitation - Reduce deferred capital replacement "backlog" to modernize and improve service and performance, and reduce operating costs

- Increase Maintenance Productivity and Efficiency - Increase service reliability and reduce costs through improved facilities, equipment, maintenance methods, training and management

- Continue Rolling Stock Replacement and Improvements - Improve age profile of rolling stock — commuter rail, rapid rail, bus and paratransit — and balance rolling stock requirements with capacity requirements

- Improve Management Procedures and Accountability - Improve organizational effectiveness of each Service Board with respect to operational planning and control, labor relations, work rules and cost control, and management process

Elements of the Cornerstone Program are presented for each Service Board under these general program objectives. In all cases, the recommendations will require careful study and analysis to determine the best solutions to the challenges presented. The program elements are recommended for action, but with due consideration that the accomplishment of objectives will take initial planning and engineering work by each Service Board. The Regional Transportation Authority will need to be closely involved with the Service Boards in their technical planning phases of the projects — particularly with the economic evaluation of alternatives for investment purposes. Implementation planning is an important facet of overall capital program management discussed in Chapter 5.

While the exact definition of the cornerstone system will require considerable consultation and policy considerations between the RTA and each Service Board, and may ultimately rest with the Service Boards, the major thrust of the program for each Service Board can be described. Overall, the Cornerstone Program is focused on "doing the important things well," not "doing all things to a mediocre level."

Elements of the existing system that are not included in the cornerstone system will be in the Tier 2 System. These elements will be supported for safety reasons under specific conditions. These conditions are that safety-related costs are relatively minor and represent a reasonably short return-on-investment so as not to be irreversible in nature.

Investment priorities for Tier 2 System elements would be prioritized using the following criteria, in order of importance, consistent with available funds:

1. Safety Related:	Track, structures, stations (structural), signals, industrial safety (e.g., shop and garage equipment);
2. Service Degradation Related:	Insufficient or under-maintained vehicles would drive riders away;
3. Amenity Related:	Stations, lighting, passenger communications; and
4. New Service or Expansion:	More frequent headways, new routes.

While the Tier 2 System is second priority, it is not planned for abandonment in the near future.

4.2.1.1 Cornerstone Program - CTA-Rail

Major elements of the CTA's Cornerstone Program are related to renovating key system elements, accelerating the completion of deferred capital items, and improving system performance for the cornerstone system. These elements of CTA's program, organized in accordance with investment objectives, include:

- Operational Performance - In addition to the Howard-Dan Ryan connection (funded using Interstate Transfer funds), this program element includes track and structure improvements that improve travel times and/or reduce switching or other capacity constraints. The objective of these investments would be to increase travel speeds, increase system reliability, and reduce fleet and operating costs by improving equipment utilization. In addition to reduced operating expenses and rolling stock capital expenses, these investments should add to better service for the passenger. Specific candidate programs include:

  - Examination of stations in the bottom quartile of usage or in close proximity to other stations for possible closure; and

  - Reduction of terminal times for equipment and manpower by improving terminal train turn times (i.e., reversing).

- Operational Efficiency - In parallel with operational performance investments are those investments that will decrease operational costs through reduced manpower requirements. These would include, for example:

  - Capital costs associated with conversion of rapid transit cars to one-man train operation;

  - Installation of automatic fare collection equipment, including pass readers;

  - Consideration of distance-based fares in conjunction with AFC program;

  - Consideration of reduction/elimination of owl service, and adjusting maintenance schedules accordingly; and

  - Longer-term consideration of "bank card debit" fare collection.

- Passenger Amenities/Station Program - An accelerated station rehabilitation and replacement program for Loop stations and the cornerstone system lines should be initiated with a minimum of six stations per year completely rehabilitated and improved. Development of a priority station improvement program using jointly developed RTA and CTA guidelines should focus on highest volume stations and lines to produce a quality passenger environment and maximize efficiency. Related to the operational efficiency thrusts, priorities will need to be established for station eliminations using such criteria as station volumes, proximity to other stations, availability of substitute service, relative rehabilitation cost per user, etc. A priority should be placed on complete line renewals, with highest priority given to passengers served, operations efficiencies gained, and early completion time.

  For stations on the Cornerstone Program, rehab programs should also include security elements such as TV surveillance, provisions for direct two-way contact with the control center, direct control center contact with the police security network and public address systems. Key stations should also include access provisions for mobility-limited and other handicapped individuals. Further, every opportunity should be sought to involve private sector initiatives in station redevelopment: joint development, air rights development; benefit districts; concessions; sale/lease-back agreements; and adopt-a-station programs.

- Structure Replacement/Rehabilitation Program - In conjunction with the station program element, a program to accelerate deferred capital renewal on elevated lines should be implemented with initial focus on highest volume lines in the cornerstone network. Priorities for this program include: safety first; and improving line speeds second.

- Maintenance Efficiency Program - This element of the Cornerstone Program has as its objective improved system reliability at reduced overall costs. Program features would include revamping of selected maintenance facilities in conjunction with and in support of management initiatives to revise maintenance practices emphasizing new concepts of maintenance (including change-out components, standardized repair/rehabilitation procedures, new machinery and equipment, and private contractor support). Investments in main rail shops should focus on assembly line component rebuild, use of robotics, and automation of parts control and delivery to work stations.

- Rolling Stock - Ongoing replacement or rehabilitation of rail cars is the objective of this program element. New car purchases should be geared and designed for eventual one-person operation and other technological changes, such as regenerative braking. Consideration should also be given to package purchases that capitalize life-cycle maintenance.

4.2.1.2 Cornerstone Program - CTA-Bus

Consistent with the operational initiatives for the traditional, high density urban market cluster, the near-term initiatives relate to rationalization and realignment of bus services and support of premium pricing for selected express bus services. Potentially, up to 15 percent of the existing bus fleet requirement might be eliminated by the combination of route and service rationalization and the implementation of the Southwest Rapid Transit (SWRT) to replace existing bus service; the bus rolling stock replacement program should be reduced in the near term. Therefore, capital investment activity should be focused on passenger amenities, garage-related productivity investments, and replacement of an appropriate portion of the bus fleet.

The major elements of the CTA-Bus Cornerstone Investment Program by element is as follows:

- Operational Performance and Efficiency - The capital costs associated with route rationalization and schedule adjustments analysis should be supported under this program element. These projects would include, for example, changes in bus service information and internal management support requirements (scheduling software, information system, etc.). Also included are privatization initiatives associated with route franchising and/or maintenance/servicing functions.

  Consideration should be given to making the bus system the focus for owl service in coordination with withdrawal of rail in night hours. Automatic fare collection equipment (once debugged on the rail system) should be extended to bus services. Further, efforts should be pursued to increase the utilization of part-time drivers.

- Passenger Amenities - Improved passenger service and quality along cornerstone system bus routes and transfer facilities are the focus of this element, with particular emphasis on security initiatives, passenger information, shelters and signs.

- Support Facilities Replacement and Rehabilitation - Key expenditures under this program element include bus garage consolidation, replacement/expansion, and modernization. Following the cornerstone system route and service rationalization project, capital expenditures for garage replacement and rehabilitation should be programmed to support the modified route structure and projected fleet size (e.g., SWRT reductions) with consideration for replacing aging facilities.

- Maintenance Efficiency Program - Maintenance productivity and efficiency to reduce costs and achieve higher reliability are the focus of this program element. Key to this element is the reorganization of fleet maintenance and storage plans to meet a reduced fleet and to maximize opportunities for imposition of more modern maintenance machinery and work practices. Major initiatives match those enumerated for rail maintenance with an added need to place more effort into the preventive maintenance program.

- Rolling Stock - As previously noted, more than one-third of CTA's bus fleet is beyond the useful life of 12 years. Therefore, replacement of older vehicles will continue to be an ongoing activity. But new purchases should be conditional on the completion of a route and service rationalization analysis in conjunction with both revised service levels for existing travel demand and new bus operating plans consistent with the start of service for the SWRT. Further, a program should be developed for optimum fleet composition, e.g., articulated versus standard buses versus small buses.

4.2.1.3 Cornerstone Program - Metra

The primary initiative for Metra's Cornerstone Program is the continuing consolidation and unification of the commuter rail network to better serve the traditional CBD and City markets. All facets of the system, including marketing, management, labor, daily operations and future capital investments should be focused on the program's goal of preserving and improving the best service for these important markets. The major elements in pursuing this goal include improved operational efficiency and accelerated replacement of key deferred capital items.

Metra's investment objectives for the Cornerstone Program should include:

- Operational Consolidation - A secondary motive behind all future cornerstone investment and operational objectives should be the consolidation of existing commuter rail services to unify them under Metra's control. Total systemwide control under a single, quality management group could focus on providing commuter rail service rather than juggling commuter rail purchase-of-service agreements and freight responsibilities. Because of the labor intensity of Metra's service, a key ingredient to consolidation would be to secure more flexible, transit-oriented work rules and pay scales to be implemented for improved operational performance and efficiency. Consolidated maintenance operations should standardize and concentrate procedures for improved quality with reduced resource needs. Unified control over operations will allow better utilization of both manpower and assets. Several avenues exist for achieving the ultimate unification objective. For example, one alternative might be to continue contracting maintenance-of-way and equipment functions but operating the service with Metra "owned" personnel. The first step in the unification of operations strategy should be to define the alternatives, conduct an economic cost/benefit analysis, and select the most cost-effective tactic for achieving the strategic objective of operational unification.

The timing of capital projects would also improve with unified control. The methods for securing this consolidation include a blend of investment and other actions: leveraging existing negotiations with NIRC employees to tighten work rules and reduce labor costs, renegotiating existing PSAs to increase Metra control (e.g., more freedom to bid-out capital projects), selective acquisition of critical assets and operations if analysis proves that the benefits justify the cost, pruning of high cost, low performing links, and prioritizing capital investment to accelerate improvements to the cornerstone network.

- Operational Performance - This program element relies on stricter adherence to existing and future standards to close low demand stations, not only for capital and operating/maintenance cost reasons but also to allow for increased express service, with fewer stops and faster running times. Accelerated replacement of signal interlockers and train communications should also take place to maintain a more reliable and flexible operating environment. All of these investments would allow for better overall operating performance and improve passenger level of service as well.

- Operational Efficiency - The Cornerstone Program investments which reduce manpower requirements will give the greatest improvements in operational efficiency. A phased-in systemwide automatic fare collection system (which may also be compatible with any CTA-AFC) would reduce station agent and conductor requirements and could potentially create a constantly updated database for planning. An honor-based fare system should also be considered to reduce labor requirements a similar amount with an even lower capital investment. The investments for improved performance could also result in decreased fleet (and crew) requirements by allowing for train sets to be recycled on shorter runs. Removal of the fireman's position could save substantial operating cost without any financial investment at all.

- Passenger Amenities/Station Program - A comprehensive prioritization of all Metra stations should take place to focus investments on stations within the cornerstone network. High passenger volume station rehabilitation and replacement should be accelerated to provide higher amenity levels to the largest portions of Metra ridership. Improvements in transfers between downtown Metra terminals and CTA bus and rail service (and ultimately a downtown distributor system) should be made to

facilitate passenger egress. Suburban station parking, kiss'n ride, and Pace bus transfer facilities should be improved as well to allow for easier access. A two-level station closing program should be considered based on existing and historical boarding counts, and closeness to other stations and CTA rapid transit lines. This program should also consider moving "land-locked" stations to new areas where more space would be available for parking and better designed feeder bus connections. The minimum standard would dictate near-term closing for very lightly used stations, and the secondary standard would target stations for gradual phasing out over time. Local communities served by stations failing the secondary standard would be given the option of meeting station operating and investment needs through individual financial agreements. Those communities willing to bear the cost, either on their own or through public-private partnerships, would continue to receive service.

- Structure Replacement/Rehabilitation Program - In parallel with the station program element, acceleration of bridge rehabilitation and renewal should be implemented on the cornerstone network. Those lines with the highest passenger volumes should be addressed first. Structures on rail segments not on the cornerstone network should be repaired on a short-term safety basis only.

- Maintenance Efficiency Program - This element of the Cornerstone Program reinforces the operational efficiency and performance objectives: providing more reliable rail service at a lower cost. Acceleration of specific locomotive and passenger car shop and yard replacement should take place in conjunction with long-term plans for consolidated repair facilities and maintenance methods. Standardized repair procedures and large scale component rebuild locations should be implemented based on change-out maintenance philosophy and new maintenance equipment.

- Rolling Stock - The main objective of this Cornerstone Program element is to maximize passenger comfort and service reliability through ongoing rehabilitation and replacement of locomotives, passenger cars and electromotive units (EMUs). The fleet requirements may be reduced based on selective pruning of the network or improved fleet utilization through unification, station closings, and the potential of higher speeds permitting schedule adjustments.

4.2.1.4 Cornerstone Program - Pace

The major elements of Pace's Cornerstone Program will concentrate on serving both the intra-suburban "growth" and "stable" markets, and providing feeder service for the CBD-bound markets. The primary investment focus will be to reorganize existing fixed-route and feeder service to improve internal and external coordination between Pace carriers and between Pace, Metra and the CTA. Fleet composition will shift more toward paratransit vehicles, and other investments will be required for transfer stations, centralized maintenance and maintenance productivity increases.

These elements of Pace's Cornerstone Investment Program should include:

- Operational Performance and Efficiency - Service rationalization should take place to replace low ridership fixed-route service with an improved demand-responsive paratransit or alternative service delivery concept for paratransit service, freeing up some existing resources to improve feeder bus links. Fixed-route services should be examined for dual-purpose functions such as feeding rail and providing community service by "pulse-scheduling" routes focused on transit nodes for easy transfers for non-rail travelers.

- Operational Performance and Efficiency - Investments in service monitoring tools should be implemented to automate route-level evaluations and contract compliance by contract carriers. The monitoring program will be used to rationalize service, reducing or eliminating under-utilized service, and redirecting resources to better performing fixed-route and feeder bus services. Paratransit replacement services in the form of vanpools and/or user-side subsidized taxi services will reduce operating costs for low volume service areas. These services will require new capital investment. (Large scale investment in paratransit services is included in the New Initiatives Program.) Express bus service should be implemented on a selected basis so as not to compete with rail service but with an eye towards contingency plans to replace rail service links should they be deleted from the network. All of Pace carriers' services should be reoriented to provide for better internal coordination among carriers and external coordination through feeder service to Metra and CTA-Rail lines. Use of part-time operators should be expanded to cut operating costs as well.

- Stations/Passenger Amenities - The Metra and CTA elements for providing better inter-Service Board coordination call for the development of more transfer centers along Metra and CTA-Rail lines. A combination of fixed facilities and schedule coordination (e.g., pulse-scheduling) will reduce passenger delays and improve overall performance for all three Service Boards. A similar arrangement could be made where CTA and Pace buses terminate in proximity to the City border.

- Support Facilities Replacement and Support Facilities Rehabilitation - The primary investment focus for Pace would be to consolidate maintenance functions to reduce total capital needs and improve maintenance efficiency through centralization and modernization.

- Maintenance Efficiency Program - Because of the diverse nature of the services Pace is (and will be) providing, implementation of an automated maintenance management information system (MMIS) would increase productivity and allow for better preventive maintenance and centralized parts purchasing. Other efficiency measures would focus on standardized repair procedures and component change-out maintenance philosophies at centralized maintenance facilities. Privatization of some or all maintenance functions should be implemented, and joint Pace/CTA component rebuild schemes explored.

- Rolling Stock - Service rationalization and improved maintenance methods should reduce fleet requirements. Pursuing a paratransit strategy for suburban services could involve a variety of management/ownership/maintenance arrangements which potentially could be shifted to the private sector. Thus, the replacement of paratransit vehicles by Pace might be accomplished through the capitalization of multi-year operating/service contracts handled through lease arrangements. Otherwise, a portion of rolling stock investment will be transferred to replacement paratransit service vehicles. Ongoing rehabilitation and replacement of vehicles for cornerstone service should continue.

4.2.2 New Initiatives Program

Beyond the Cornerstone Program, which is oriented toward preservation of the more important elements of the existing network, investments in New Initiatives are oriented towards experimentation with new innovative services.

One important consideration in the project selection process for the New Initiatives Program will be the cooperation and participation of both the public sector planning agencies and local governments and the private sector developers. The opportunities for cost-effective investments by the RTA and Service Boards are improved if land use, development and circulation concepts are planned that will take maximum advantage of the accessibility afforded by the region's transit system. The elements of design that are conducive to long-term transit system economic health include density and proximity to service — factors which add up to transit ridership potential. Participation in project financing between developers, local communities and the RTA or Service Boards is, obviously, a positive factor in the prioritization of New Initiatives projects. Also, local community leadership in seeking out developers, maintaining flexibility on zoning and other requirements, and forging relationships between transit providers and the developer community is an important factor for success. A symbiotic relationship between land use development and public transportation infrastructure can be forged with the community if these mutually beneficial factors are recognized. Perspectives on the New Initiatives by Service Board are described below.

4.2.2.1 New Initiatives - CTA

The CTA network is already mature and pervasive, providing the City of Chicago and neighboring suburbs with extensive service. The "Bedrock" transit network for the CTA already includes the addition of the Southwest Rapid Transit line and the Howard-Dan Ryan connection of the two major rapid rail lines. Beyond this network, there are "new" opportunities associated with the downtown distributor. The need for a downtown distributor is evident to protect the CBD transit market, and this need will only increase as the CBD development expands. The Lake Shore corridors are currently dependent on an extensive express bus network which is a high cost service to the CTA in these high volume corridors. Conversion of the ICG local service on the South Lake Shore to a rapid rail operation should be more closely evaluated. In addition, consideration should be given to extension of this service to the near north side as a more effective alternative to the express bus service if it could increase market share in this growing area of the City.

4.2.2.2 New Initiatives - Metra

The major new initiatives for Metra revolve around physical consolidation of terminals, yards and lines and creating better access for both suburban and downtown stations. A combination of new starts, experimental services and planning studies in each of the areas will help to create a healthier rail network for existing Metra passengers and gain market share in the growth and stable markets outlined earlier in this chapter.

New initiatives for Metra should include:

- Railroad Consolidation - New initiatives for consolidation extend the operational consolidation element of Metra's Cornerstone Program. The location and layout of existing CBD terminals, yards and shops, and route alignments should be rethought through a series of planning studies to streamline commuter rail asset needs and tie in with future Metra maintenance plans and the downtown distribution roles of both Metra and the CTA. Examples include the transfer of Rock Island trains from LaSalle Street to Union Station (CUS) which would force some redesign of CUS track and passenger circulation, but open up several consolidation opportunities. LaSalle Street Station itself and track south to Englewood could be abandoned (greatly reducing the existing need for large structural replacement costs on the section). CUS could be redesigned with several through tracks, allowing Rock Island trains to be serviced at Western Avenue or California Avenue/M19A and the 47th Street Yard to be closed. Also, Rock Island and Milwaukee service could be rescheduled to create run-throughs of Milwaukee trains south and Rock Island trains north to provide better fleet and crew utilization. Consolidation of Western Avenue and California Avenue/M19A facilities could save labor while being designed for new maintenance equipment and procedures. The planning studies would require full investigations into the financial, operational, institutional (labor unions/PSA carriers) and timing aspects of each of these consolidation opportunities.

- Improved Access/Egress - The thrust behind this set of new initiatives would be to increase market share for Metra (and indirectly for Pace and CTA) by improving the access portion of passenger trips. On the suburban end, better access could be created with increased Pace/Metra coordination, larger or improved parking and kiss'n ride facilities, and station relocation.

  Transfers between Metra and Pace services could be improved through development and redesign of new and existing transfer stations, and schedule coordination on a systemwide basis. Redesign of station layouts and selective enlargements of at-capacity parking lots could improve and increase park'n ride and kiss'n ride usage. Station relocation projects could be implemented instead of station replacements when better access to highways or increased parking capacity result.

Looking at the CBD egress from downtown Metra stations, a variety of initiatives could be implemented, ranging from improved signing to total incorporation (with the CTA) into a downtown distributor system. In conjunction with any consolidation of Rock Island service at CUS Station, improved and enlarged passenger circulation areas, extra entrances and exits, and informative signing would be necessary to allow for an adequate passenger egress flow. With a downtown distribution system in place, signing, escalators and moving sidewalks would facilitate the intra-terminal transfer from commuter rail platform to the distributor platform.

4.2.2.3 New Initiatives - Pace

The name of the game for Pace is change. The Pace service area of inner and outer suburbs is undergoing the highest levels of population and employment growth. A restructuring of the Pace network through a series of integrated investment initiatives is a vital step in redesigning Pace service to capture more market share in the area's resulting travel growth. The new initiatives for Pace should extend the transfer stations proposed under the Cornerstone Program to a network-wide transportation center application, set up experimental circumferential service and implement large-scale paratransit services throughout the suburban areas to "test the waters" on a demonstration basis.

Pace's new initiatives investment program elements follows below:

- Transportation Centers - A cooperative regional network of transportation centers should be established, located at major Metra stations, end-line CTA stops, and large employment or activity centers. These centers would act as hubs in a suburban network connecting paratransit, fixed-route bus, and line-haul rail services for high performing intra-suburban routes and vital feeder bus links. These centers would collect local paratransit riders for transfer onto rail lines or fixed-route bus service into the City or circumferentially into the suburbs. Schedule coordination between routes and modes is essential to compete favorably with auto travel. An example would be a center on the Lake Cook Road project.

- Circumferential Service - Experimental fixed-route circumferential service should be implemented to link transportation centers for intra-suburban travel. Operated as 6- or 12-month demonstration projects, a variety of intra-suburban markets could be tested to find worthwhile markets with low,

long-term risk. If routes prove successful, more permanent facilities such as highway diamond lanes, exclusive busways or possibly even light rail service could be added as the capital funding situation and ridership volumes become clearer.

- New Paratransit - As a supplement to the replacement of fixed-route service by paratransit service, new paratransit service serving both ambulatory and mobility-limited markets could be introduced initially on an experimental basis in outer rural markets. These demonstration projects could be operated for 6- or 12-month periods as self-contained units, with labor hired on a short-term basis and assets easily transferrable at the end of a program to a new area if the project was discontinued. These projects would extend the reach of previously mentioned transportation center networks with a low-risk, reusable investment.

4.2.3 New Technology Program

Technology represents an opportunity to improve transit service to the passenger and, in certain situations, reduce operating costs. The relative maturity of transit delivery systems in the Chicago area increases the opportunities to benefit from technology investment. The focus of these opportunities is directed at the automation of manually performed jobs or replacing aged or outmoded technology with existing and/or state-of-the-art technology. These opportunities exist for each Service Board across the spectrum of demographic scenarios.

Technology improvement can be introduced into the transit system through the scheduled procurement process of updating equipment or through a planned shift in the entire approach to a new process. The first approach will incrementally update the base network as newer technology is introduced, while the latter approach requires a careful and thoughtful analysis and typically a major investment to chart an entirely new course.

It is this latter group of technology improvement opportunities which is pertinent to this strategy plan. These opportunities which can chart a more cost-effective approach to transit are listed for each Service Board:

- CTA Systemwide
  - Automated fare collection
  - Direct bank card debiting of fares
  - Robotics applications in component rebuild and servicing

- CTA - Rail
  - Automation of train operations - staged implementation
    - One-person operation
    - Cogeneration of power
  - Leases of rights-of-way to telecommunications companies for revenue generation

- CTA - Bus
  - Increased vehicle fuel efficiency
  - Substitute fuels (e.g., methanol)
  - Higher capacity vehicle utilization
  - Automatic fare collection — swipe read or other technology

- Metra
  - Vehicle replacement on lighter used lines with one-person operated light rail diesel cars
  - Introduction of automatic fare collection equipment to match systemwide specifications
  - Introduction of ticket cancelling equipment
  - Honor fare systems

- Pace
  - Lower capacity vehicle utilization
  - Route deviation systems
  - Automatic vehicle monitoring systems (AVMs) to control/coordinate paratransit

While other technology options exist, those listed here represent the most viable in terms of proven results or potential total savings. Each option, obviously, requires further analysis — both in terms of total cost implications and measurable service improvement for the Chicago area system.

4.2.4 Capital Program Allocations for Investment Programs

Investments in all three programs — the Cornerstone Program, the New Initiatives Program, and the New Technology Program — are important to each Service Board. Given that there is a negative $2.2 billion capital program balance due to overdue asset replacement and rehabilitation, and that annual capital costs ($375 million) exceed available resources ($233 million) by $142 million, the near-term emphasis will need to be placed on the Cornerstone Program. However, the investment of scarce capital dollars should include elements of all three programs regardless of the funding levels. An example of a capital allocation for each Service Board across the three programs illustrating the relative size of Service Board needs and investment priorities is shown below.

Capital Program Allocation
Across Programs and Service Boards

Program	CTA	Metra	Pace
Cornerstone*	90%	80%	50%
New Initiatives	3%	5%	45%
New Technology	7%	15%	5%
Total	100%	100%	100%

* Up to 10 percent of Cornerstone Program available for Tier 2 investments if justified

This allocation is, of course, just a starting point for policy consideration.

4.2.5 Capital Program Management Needs

Capital programming and project management is practiced by each of the three Service Boards. The RTA's role is to allocate available capital funds and approve capital program requests.

Capital programming within the CTA is coordinated in one office with individual projects managed by appropriate departments. Most of the projects are managed by the Engineering Department, since rolling stock, structures and facilities require considerable engineering experience and expertise to complete. For new starts and major rehabilitation efforts (such as the Southwest Rapid Transit System and the Howard-Dan Ryan connection), the project work is managed and conducted (or contracted) by the City of Chicago's Department of Public Works.

Metra's capital program management is similar to CTA's in that individual projects are under the auspices of selected departments. Since most of Metra's service is furnished by private railroads through purchase-of-service agreements, considerable coordination, and joint planning and financing is required. While rolling stock purchases may be handled entirely "in-house," the rehabilitation of structure, track or other facilities is often conducted by the railroads using their own crews. These additional "layers" of management and responsibility for work performance create unique issues for Metra of scheduling work on projects — particularly for projects related to track, structure and facilities.

Pace's capital program is conducted primarily "in-house," since capital programs are mostly rolling stock related. Engineering design and construction management for garages is also managed through Pace headquarters.

Given the staff resources, the RTA has played a relatively minor role in project evaluation and prioritization. Overall emphasis for capital programs is given to the Service Boards along with capital allocation through a series of work sessions. The justification of projects is performed within each Service Board, and their "best" projects discussed in open forum. Through this discussion process, a consensus is "hammered out" as to the most appropriate allocation of funds to Service Boards and projects given available funding, funding agency requirements and analyses, "historical" funding levels for each Service Board, and the perceived priorities of the four Boards. This process is not uncommon in the transit industry, particularly for larger transit agencies with significant ongoing rehabilitation, replacement and modernization requirements.

The process has, however, several shortcomings — both for today's constrained capital funding environment and for (potentially) an expanded capital funding:

- Project justification is inconsistent, when performed, and often superficial.

- Resource allocation is not justified (except in general terms) by rigorous analysis defining cost-benefit, return-on-investment, or other economic investment criteria.

- System planning at the regional level is often not performed such that the question of what to invest in (new/replacement yard, new bus orders, etc.) is bypassed and replaced by questions of how to accomplish the project (who is the best rolling stock manufacturer, engineering designer, etc.).

- Project implementation oversight or engineering review is not performed and the expenditure of scarce resources in accomplishing regional objectives is effectively disseminated to those with different responsibilities (financing, specification compliance, etc.) rather than at the broader levels.

- Multi-year project planning, programming and capital budgeting is not performed in other than a cursory manner — the focus is how to spend what we have this year, not what should we be spending this year, the next five years and beyond.

- Regional transit planning has not been integrated into existing multimodal planning processes; rather, decisions on regional priorities for transportation investment are driven by external funds availability with little proactive effort to effect a resource mix (i.e., funding) that is more conducive to the region's overall welfare (balancing, for instance, transit and highway needs).

In short, a priority has not been given to the level of sound, regional transit planning and capital programming that is needed for the region. Funding is "spread around" with little (regional) focus on priorities and limited justifications. Prior planning/feasibility studies have not been focused toward regional perspectives, but have been oriented toward more narrow (though valid) engineering or operational feasibility grounds. Broader issues of service levels, patronage and capital program focus (i.e., Cornerstone, etc.) have not been followed.

This capital programming and management function will need to be significantly improved under both existing conditions (scarce capital funds) and potential future conditions (adequate capital funds). In the former case, better decisions need to be made on capital projects and justification of projects within capital investment programs (Cornerstone, New Initiatives, and New Technology) with a considerably expanded technical analysis capability. In the latter case, increased capacity to manage the project analysis and programming workload needs to be added to insure that resources are effectively expended and anticipated results achieved. Increased focus is then given to project scheduling and programming. Also, the capacity for technical planning, engineering, design and construction through both in-house capability and contractor support needs to be expanded. Management of the process is important; finding the capacity and talent to get the work done is fundamental.

4.3 FINANCIAL STRATEGIES

The approach to financing the investment programs and operations of regional transit is described in this section. First, the magnitude of the capital funding shortfall is described in terms of the amount of current service that can be retained if this funding shortfall should continue. Next a discussion of the atability of existing operations funding is presented to highlight some pending problems of fund allocation that need to be corrected. Third, an analysis of capital funding opportunities from internal sources (operating surpluses) is presented to explore the impacts of cost containment strategies on capital contribution. Finally, a set of financial strategy conclusions is presented, along with an array of new funding sources and yields, for consideration as new funding sources.

4.3.1 Capital Investment Focus under Capital Shortfall

Analyses of the uses and sources of capital funds, along with current infrastructure replacement and rehabilitation needs, has highlighted the future capital shortfall:

- Bedrock capital needs for the RTA system are $375 million per year while capital funds have averaged and are not anticipated to exceed approximately $233 million per year;
- Stretching the Bedrock capital need to its ultimate drops the requirement to $296 million — still $60 million over expected funding levels;
- Deferred capital investments also exist that total $2.24 billion — a backlog of replacements representing 16 percent of the total system replacement value.

As described earlier in this chapter, the cornerstone network defines the heart of the region's infrastructure, ensuring the long-term survival of at least the most critical parts of the RTA system. With existing sources of funds, a capital shortfall is virtually guaranteed, and prioritization must take place to maintain the region's most productive rail and bus service at a high quality level. The remainder of the system need not necessarily be abandoned immediately; short-term investments for safety measures and minimal passenger amentities would continue to take place for all services until such time as future additional funding sources are obtained or can definitely be ruled out.

Disregarding the deferred capital backlog, a "what if" exercise was performed to gain a sense of size for the supportable cornerstone network.

Exhibit 4-4 outlines in a general format what percentages of the system could be properly maintained and/or rehabilitated with the anticipated capital funding. If the $233 million were divided evenly among CTA-Rail, Metra and all bus services, 62 percent of each could be preserved. Concentrating capital on rail elements would allow 75 percent of both CTA-Rail and Metra to be retained within the cornerstone network. Preserving 100 percent of bus services would only allow 54 percent of Metra's network and 54 percent of the CTA-Rail network to be retained.

Putting the problem into perspective at a lower level of detail gives a more tangible feel for the size of a "funds" controlled cornerstone network. Under the assumption that 62 percent of all services would be protected equally, the network would consist of the following:

- CTA-Rail: System would drop from 1,200 to 750 cars and the number of lines (including the Southwest Rapid Transit Line) would reduce from seven to five rapid transit lines, and up to 30 million annual trips would be diverted to bus or use other rapid transit lines or be lost;
- Metra: The fleet would be reduced from 860 to 540 passenger cars which would operate on seven commuter rail lines, resulting in the diversion or loss of up to 5 million passengers out of the current 13 million; and
- Bus: 1,430 City and 330 suburban buses (compared to 2,300 and 670 now), resulting in up to 100 million lost passengers per year.

Exhibit 4-5 outlines this same sizing approach under the three hypothetical cornerstone network option possibilities presented earlier. This sizing exercise illustrates the wide variety of service combinations to be fitted into any cornerstone network definition. It also points out the necessity for preserving those system elements which present the best performance from a total patronage, efficiency (operating <u>and</u> capital cost) and equity perspective. The decision-makers who define the cornerstone network must be willing to force those criteria through divergent political arguments to ensure the best possible network choices are made while other funding options are pursued.

Pursuit of a "stretch" strategy for capital replacement; i.e., extending the lives of assets beyond their useful lives, is not an answer to the capital shortfall. With extended age of assets there is a host of problems: increased maintenance costs, increased inspection and safety problems, reduced passenger comfort and

EXHIBIT 4-4
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

"What If" Cornerstone Network Options
for $233 Million Anticipated Capital Funding

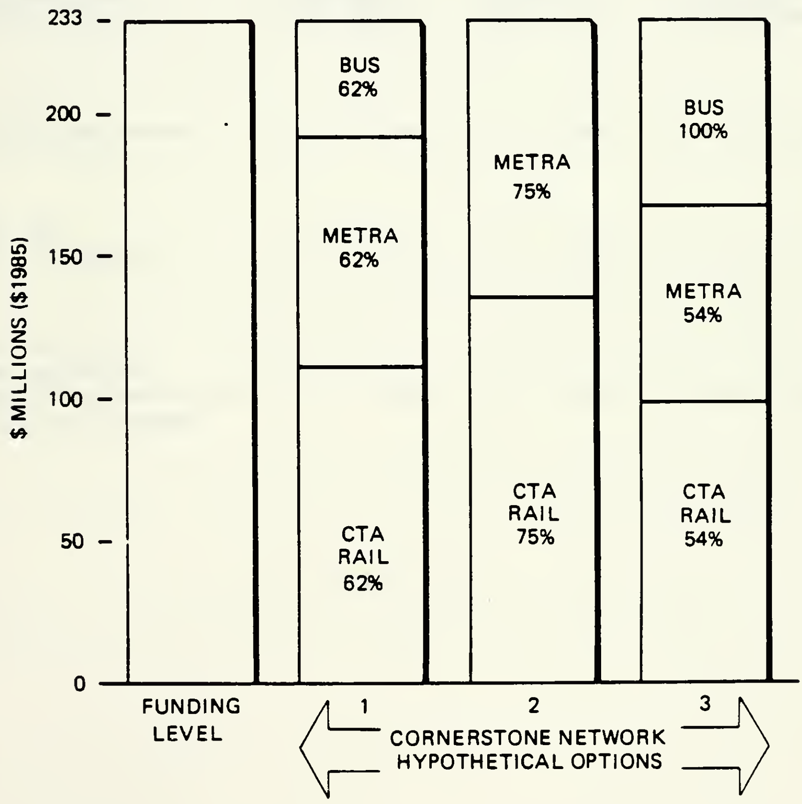


EXHIBIT 4-5
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Detailed Cornerstone Network Options

Cornerstone Network Description	Service Size					
	CTA-Rail		Metra		Buses	
	Lines	Cars	Lines	Cars	Garages	Buses
1. Protect 62% of All Existing Service	4	750	8	540	12	1,760
2. Protect 75% of All Rail Service	5	900	10	650	—	—
3. Protect 100% of Bus Service and Equal Amounts (54% each) of Metra and CTA-Rail	4	650	7	460	20	2,800

service reliability, and negative market impacts. Ultimately, the level of service is degraded, the patronage levels are eroded, the operating and maintenance costs are increased, and the risk of serious accident and injury becomes so great that a decision must be made to discontinue operation. This would be the ultimate fate of the Tier 2 System if an additional capital funding source is not found.

4.3.2 Stability of Existing Financial Support Arrangements

From projections of external funding, a hypothetical analysis of resulting Service Board allocations of formula and discretionary funds which adhere to the letter of the law and assumes continuation of 1985 proportions of expenses and revenue indicates an inbalance in existing formula distribution funding arrangements will occur in the short-run. The "break-down" of the formula results from Metra's growing proportion of formula tax revenue relative to its external funding need. Essentially, Metra's formula tax revenue would exceed its external funding requirement before 2005. Since Service Boards are entitled, by statute, to receive their full amount of formula funds, regardless of need, the RTA has no power to redirect this surplus to meet the operating needs of the other Service Boards. Further, as a result of Metra's, and to a lesser degree, Pace's diminishing external funding requirement, increasing proportions of remaining discretionary funds would be used, almost exclusively, to fund CTA operations.

The phenomenon is illustrated by an example (Exhibit 4-6). Projections of external revenue available and proportional growth in each Service Board's expense, revenue and funding need are contrasted to the existing formula allocations of sales tax funds. Subtracting funding needs from formula allocations shows that total formula allocations do not meet total needs, but Metra's requirement ($145 million in 1995) is fully met. By 2005, Metra is allocated $193 million, or $8 million in excess of its need. Under current legislation, Metra retains this surplus, though discretionary funding would be less than required by CTA and Pace.

In addition, Pace's need of discretionary funds grows slightly in the optimistic scenario, and decreases in the pessimistic case; while the amount of CTA need increases significantly. Thus, a greater proportion of the discretionary funds is allocated to the CTA.

Though "simple mathematical remedies" can correct this situation, for instance negotiating with Metra to purchase services from CTA and Pace in an amount equal to its formula surplus; this illustration highlights the inappropriateness of existing formula allocations in light of future financial and demographic change trends.

4.3.3 Analysis of Internal Financing Strategies

The financial analysis of the RTA under three scenarios (optimistic, neutral, and pessimistic) was described in Chapter 3. That analysis shows that one way to partially resolve the capital shortfall issue is to maximize operating surplus and convert this surplus to capital after prudent reserves are retained to mitigate short-term cyclical impacts on operations.

EXHIBIT 4-6
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Test of Current Sales Tax Allocation Formula
Assumes Minimum Requirements of Law — Costs Set Equal to Net External Revenue Plus Minimum System Revenue
(Millions of 1985 $s)

			Optimistic				Pessimistic			
	1985	Formula Allo-cation	1995	Formula Allo-cation	2005	Formula Allo-cation	1995	Formula Allo-cation	2005	Formula Allo-cation
External Revenue Available for Operations	439		595		758		485		548	
Minimum Revenue Required	445		595		758		485		548	
Supportable Budget	$884		$1,190		$1,516		$970		$1,096	
Proportionate Board Expense (1985 Base)										
CTA	587		790		1,006		645		728	
METRA	237		319		406		260		294	
PACE	60		81		104		65		74	
Proportionate Board Revenue (1985 Base)										
CTA	297		397		506		324		366	
METRA	130		174		221		142		160	
PACE	18		24		31		19		22	
Funding Need										
CTA	290	$152	393	$194	500	$252	321	$170	362	$189
METRA	107	107	145	145	185	193	118	127	134	145
PACE	42	32	57	44	73	60	46	39	52	45
Discretionary Balance		$148		$212		$253		$149		$169
Needs from Discretionary Balance										
CTA		$138		$199		$248		$151		$173
METRA		0		0		(8)		(9)		(11)
PACE		10		13		13		7		7
Discretionary Need		$148		$ 212		$ 261		$158		$ 180
Shortfall Created by Formula		0		0		8		9		11

The key to defining a strategic financial thrust is to understand the relationships between external funding and operating costs. The opportunity to "capitalize" operating surpluses for capital investment hinges on the amount of surplus, if any, that occurs in the future and the policies that can be established both by the RTA and Service Boards to capture these funds.

Estimates of future external funding levels (including sales tax, PTF and Section 9 from UMTA) have been projected to rise from $486 million in 1985 to a range of between $762 million (optimistic) to $557 million (pessimistic) in 2005.

External Funding
(Millions of 1985 $)

	1985	1995	2005
Optimistic		$598	$762
Neutral	$486	$584	$727
Pessimistic		$495	$557

Even under the most pessimistic assumptions, the level of external funding, in 1985 dollars, increases.

The opportunity to capitalize on this external operating funding growth is based on cost containment. If operating funds are not fully used in operating the system, surpluses will result that can be used to support the capital programs.

For example, under a zero cost growth policy (i.e., costs grow no greater than inflation), external funding will grow from 55 percent of cost in 1985 to 82 percent in 2005 using a neutral external forecast assumption (Exhibit 4-7). Since at least 50 percent of the costs must be covered from system-generated revenues, the amount of external funds coverage above 50 percent is available as surplus. By 2005, this surplus could be as much as 32 percent of the available external funds, or $280 million.

If historical cost growth (above inflation) is projected into the future and contrasted with external fund forecasts, the "surplus" opportunity is either not available (given neutral and pessimistic external funds forecasts), or of minor magnitude. As shown on the bottom portion of Exhibit 4-7, the surplus under the neutral forecast actually turns into a deficit.

Under a cost containment situation with expense growth equal to inflation (zero cost growth), the availability of surpluses from external funds creates several opportunities (Exhibit 4-8). One opportunity is to reduce fares keeping recovery ratios at their current levels. This choice is best from an operating viewpoint as it allows ridership to grow above secular growth levels due to the elasticity effects of

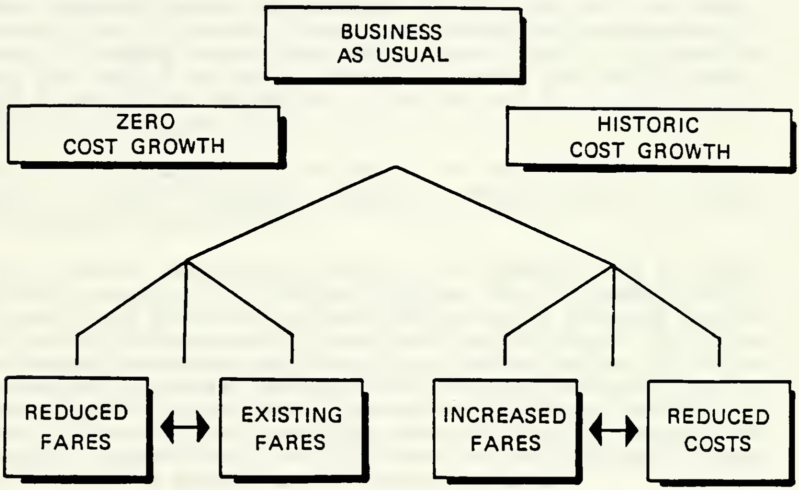
EXHIBIT 4-7
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Comparison of External Funding Level Forecasts
to Cost Growth Alternatives
($ Millions)

Operating Cost Levels	1985	1995	2005
No Growth			
CTA	$587	$587	$587
Metra	237	237	237
Pace	60	60	60
RTA	7	7	7
Total	$891	$891	$891
External Funding Level (Neutral Forecast)	$486	$584	$727
Percent covered by external funds	55%	66%	82%
Percent "Surplus"	5%	16%	32%
Historical Growth			
CTA	587	720	948
Metra	237	303	416
Pace	60	76	102
RTA	7	9	9
Total	$891	$1,108	$1,475
Percent covered by external funds (neutral forecast)	55%	53%	49%
Percent "Surplus"	5%	3%	-1%

EXHIBIT 4-8
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Ramifications of Policy Choices
under Basic Cost Containment Circumstances



IMPACTS				
RIDERSHIP	GREATER THAN SECULAR GROWTH	SECULAR GROWTH	REDUCED OVER SECULAR GROWTH	REDUCED OVER SECULAR GROWTH IF SERVICES CUT
RECOVERY RATIOS	CURRENT LEVELS	ABOVE CURRENT LEVELS	CURRENT LAVELS	CURRENT LEVELS
CAPITAL CONTRIBUTION	GOOD	EXCELLENT	POOR	FAIR

reasonable fares. Another choice is to leave fares at current levels, retain greater surpluses, and preserve even larger amounts of external funds for capital. This choice is not as favorable from a ridership viewpoint, but contributes more substantially to capital programs. A range of intermediate choices can be taken reflecting a priority towards either current ridership or capital funding.

The choices in a "cost growth" situation are not as favorable. They consist of increasing fares, or periodic forced cost reductions ("required expense reduction"), to make the recovery ratio requirements (Exhibit 4-8). If increased fare policy is followed, fares rise quickly and substantially impact ridership similar to the impact of the 1981-1982 financial crisis. Capital contributions in this case are modest at best if not zero, since all external funding is used for operations. A periodic cost control effort to deflate costs can hurt patronage if services are cut — particularly if they are cut in haste to meet crisis conditions. Ongoing service adjustments to match service to changing demands can result in overall service reductions and cost control with little or no loss in ridership. However, this type of service planning and implementation requires time to be done well, and time is a scarce commodity in times of financial crisis.

Estimates of the approximate effects of the interaction between cost containment, fare policy, demographic scenarios, ridership levels, and capital contribution are shown in Exhibit 4-9.

Under the historic cost growth situation for all scenarios, fares are higher than for the zero cost growth (at inflation) situation. Also, the negative capital balance increases under the neutral and pessimistic scenarios, indicating that the existing $2.24 billion deferred capital balance becomes even worse. This occurs since annual capital costs are not met from existing funding sources. Only in the optimistic case (which includes an unspecified $100 million per year added external funding source) does the Service Board negative capital balances improve. For each scenario, the zero cost level contributes more to the capital program than does the historic cost growth level. Also, fare levels are lower and ridership higher for zero cost levels versus historic cost levels in every scenario.

This analysis leads to several basic conclusions:

- Controlling operating costs to the existing level of inflation in contrast to allowing operating costs to rise above inflation is beneficial from several viewpoints:

  - Fares are kept at lower levels

  - Ridership can achieve secular growth rates without the dampening effects of fare increases

  - Surpluses from unused external operating funds can be capitalized to assist the financing of a capital program.

EXHIBIT 4-9

RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Comparative Impacts of Cost Levels on Ridership, Average Fare and Capital Contribution

Cost Level	Year	Forecast	Ridership (Millions)			Average Fare(1)			Capital Balance(2) (Negative 1985 $) (Billions)		
			CTA	Metra	Pace	CTA	Metra	Pace	CTA	Metra	Pace
	1985	Base	644	64	38	.42	2.01	.46	1.81	.43	0
Zero Cost Growth	1995	Optimistic	637	69	45	.45	1.78	.40	1.07	.22	.06
		Neutral	593	66	44	.48	1.85	.42	1.97	.54	.09
		Pessimistic	557	63	38	.51	1.96	.46	2.61	.82	.11
Historic Cost Growth	1995	Optimistic	604	66	42	.58	2.30	.53	1.28	.40	.06
		Neutral	562	63	41	.62	2.44	.55	2.18	.72	.10
		Pessimistic	494	60	36	.88	2.55	.62	2.59	.89	.11

(1) Average fares are in 1985 dollars. If inflation is assumed to be 2 % per year, the average fares in 1995 would be: CTA $.51; Metra $2.45; Pace $.56. If inflation were 3 % per year, the fares would be: CTA $.56; Metra $2.70; Pace $.62. Fares for each Service Board in 1995 were adjusted to meet either recovery ratio targets or budget balancing requirements, whichever was required.

(2) Capital balances are all negative, reflecting the current deferred capital condition. Lower values therefore represent better conditions; higher numbers reflect worse conditions.

- Except under the most improbable conditions of extended periods of cost containment, linked with optimistic external funding yields, the contribution to the capital program from operating surpluses is minimal. Additional external funding will be needed to support the full range of improvements contemplated in the Cornerstone and New Initiatives Capital Programs.

4.3.4 Financial Strategic Directions

Faced with an existing $2.24 billion backlog of transit replacement and rehabilitation requirements and an annual capital funding level that is approximately two-thirds of the required $375 million per year required, initiatives for new funding sources are imperative. While the RTA has taxing power, a myriad of other sources might be reviewed with a view (Exhibit 4-10) to establishing an ongoing, stable and inflation-sensitive funding source — preferably one that is supportive of transit investments through disincentives for use of the automobile.

RTA enabling legislation permits external funding from either the sales tax or, if implemented in place of a sales tax, any one of three other taxes (gasoline, parking or replacement vehicle tax). A change in legislation is necessary for a simultaneous implementation. Of these three additional taxes, a 5 percent tax on gasoline offers a potential yield of $95 million. Much smaller yields can be expected for parking and replacement vehicle taxes. If the present retail sales tax rate were increased by 50 percent, the yield would be approximately $175 million. Other private-public partnership oriented financing arrangements are numerous; they typically are most relevant to a project and may, therefore, be an important ingredient in financing the New Initiatives Program.

The expected yields from current capital funding sources cannot support the capital needs of the <u>total</u> RTA system. Therefore, in the short-run, the focus of any capital investment plan must be on prioritization of available funds for the capital needs of the most important pieces of the network — the cornerstone network. In the long-term, the region needs to grapple with the problem of finding new capital funds or seriously curtailing the network and services.

In the short-run, the RTA has bonding capability (potentially up to $400 million available) that can be used to create a "head start" on the Cornerstone, New Initiatives, and New Technology Programs. Prior to making any short-term investments, however, a number of issues need to be resolved with the Service Boards:

- Definition of the cornerstone network;
- Resolution of the unbalanced formula funding — particularly as it leads to aberrations in capital investments between Service Boards;

EXHIBIT 4-10

RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Potential Additional Revenue Sources and Yields - 1986

	Annualized Amount ($ in Millions)
Sales Tax Increase of 50%, to 1 1/2% for Cook County, and to 3/8% for Collar Counties	$170 - $175
Sales Tax Increase of 100%, to 2% for Cook County, 0.50% for Collar Counties	$340 - $350
Property Tax, 5 Mill	$25 - $30
Regional Share of Statewide Personal Income Tax, Increase of 0.25% (Corporate Tax Increased by 0.40%)	$200 - $250
Reinstate RTA Gas Tax, 5%	$95
Parking Tax, 5%	$5 - $10
Replacement Vehicle Tax	$1 - $2

- Development of a management structure capable of controlling a capital program up to double current size; and

- Concurrence on the desired funding source and the development of support to capture this source for the RTA.

4.4 PRIORITY SETTING

The current status of the RTA has been reviewed in depth in Chapter 2; alternative futures and the threats and opportunities they portend were described in Chapter 3; and strategic thrusts on a number of dimensions pursued in this chapter. An important question is: What strategies should have the highest priority? And, what strategies will need to logically await progress from higher priority strategies, or conditional performance of the economy or outside institutions.

4.4.1 Synopsis of Strategic Thrusts

The major strategic thrusts discussed include:

- Market Priority - Focus of operations plans and improvements;

- Cornerstone Protection - Specification of a capital program designed to invest in the most important elements of the RTA system — both now and for the future;

- New Initiatives - Exploration of new service concepts at one end of the spectrum to investments in improved productivity and performance in rail operations at the other;

- Technology Investments - Infusion of new technology in terms of equipment (e.g., fare collection), techniques (maintenance procedures and equipment), and most cost-effective modal alternatives;

- Operating Cost Containment - Establishing a cost containment philosophy to support both capital program costs and, even more importantly, protect the ridership base and good will of the RTA constituency;

- Institutional Change - Adjusting and adopting new formulas and working arrangements between the Service Boards and the RTA while modifying the legislation to avoid confrontational, crises-oriented problems; and

- New Funding Sources - Financing the Cornerstone and New Initiatives Capital Programs using a stable, consistent, reliable, and inflation-sensitive funding base.

The appropriate blend and priority of these strategies will provide the region, RTA as its financial overseer and regional coordinator, and the Service Boards as its service providers with an enduring plan for meeting the challenges of change.

4.4.2 Priority Strategic Thrusts

The first priority has to be funding — without securing the financial resources to correct the critical capital shortfall, the current relative stability of operational funding and service provision will be in jeopardy. While this is of paramount importance, initiatives associated with each of the other strategic thrusts can be pursued while the discussion, debate and decision-making regarding additional external funding is pursued.

Almost as critical for a number of reasons is inculcating the philosophy of cost containment for the entire RTA family. Cost containment is not only a rational and reasonable policy under almost any circumstance, it is particularly important when seeking new external funding and channeling investments into the high priority markets and most economically productive avenues. Protection of the transit marketplace depends on a constancy of service: quality, dependability, and price. It is not fruitful to invest scarce capital resources in protecting key transit markets through the Cornerstone or New Initiatives Program if these consumers are faced with escalating fares on a regular basis. A commitment to cost containment is a philosophy that is important for the RTA and Service Boards not only to accept and follow but to project as a sound basis for investing in the region. Credibility as well as performance is at stake.

Initial action should begin with defining and investing in the Cornerstone System. Agreement between the RTA and Service Boards on this system should not be difficult as far as the core elements of the system — debate may range, however, on the extent and focus of each element — and this is fruitful. But it should not detract from an initial agreement to the high volume services in the traditional service areas where existing scarce capital resources should be concentrated. The elements of the Cornerstone System and Tier 2 Systems that can be supported under existing funding are presented in Exhibit 4-11. Current capital program resources should be concentrated as fully as possible on this system while still meeting the safety requirements for the whole system (with the cavaet that such investments in safety not be of such a magnitude to be out of scale with the importance of the service).

EXHIBIT 4-11
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Preliminary Specification of the Cornerstone Network
for Existing Levels of External Funding

	Cornerstone		Tier 2	
	Line	Route Miles	Line	Route Miles
CTA-Rail				
	Howard	11	Jackson Park*	12
	Dan Ryan	12	Lake	9
	O'Hare	18	Ravenswood	10
	Congress	10	Evanston	4
	Douglas	8	Skokie	5
		59 (60%)		40 (40%)
Metra Rail				
	C&NW-NW**	43	ICG-Joliet	37
	Burlington	38	Norfolk & Western	24
	C&NW-North***	36	ICG-Blue Island	5
	C&NW-West	36	Milwaukee-North	50
	Rock Island	47	ICG-South Chicago	5
	Milwaukee-West	31	C&NW-Northwest	25
	ICG-Main Line	32	C&NW-North	16
		263 (62%)		162 (38%)

* Includes Englewood
** C&NW-Northwest to Crystal Lake
*** C&NW-North to Waukegan Only

4.4.3 Priority Capital Investment Focus

As part of a two-year priority Cornerstone Investment Program (assuming that fuller funding can be secured during that time frame), the priorities should be on both critical capital elements in the Cornerstone System, as well as additional analyses of the best "means" to achieve the "ends" of the Cornerstone System. More specifically, and in response to the need to meet the challenges of protecting the strongest and most important market clusters for the RTA — the traditional CBD-oriented market and the traditional City-oriented market — these are the priority investment areas given existing resources:

1. Accelerated CBD station programs to rehabilitate and upgrade the service levels provided by all CBD station areas — CTA and Metra.

2. Rail service operational productivity programs to complete, as rapidly as possible, the modifications to highest volume CTA and Metra lines to increase travel speed, thereby improving market competitiveness, service quality to the user, and reducing equipment requirements and low operational productivity — key to protecting the traditional transit favorable markets.

3. Analysis, evaluation and restructuring of CTA bus and Pace city and inner urban services to both adjust service to changing demand levels and establish an improved cooperative service environment between Pace and CTA at the interface of stable and traditional City market clusters — the City and inner urban boundaries.

4. Analysis, evaluation and initial investment in a longer-term integrated regional commuter rail system — a regional system that can operate under one management with work rules and compensation arrangements that are relevant to today's environment while maximizing the scale economies of a single operation — consolidated facilities, standardized communications and control systems, and consistent management and procedures.

5. Priority analysis of the opportunities afforded by paratransit for both capturing a greater share of the growth market, as well as reducing overall costs for low density suburban services.

6. Development of a task force, in conjunction with the City and other governmental entities, to pursue the opportunities for public/private partnerships — particularly in the area of critical market protection of downstream investments (i.e., the downtown distribution system) and new initiatives investments (i.e., expanded inner circumferential services and transportaion node development).

7. Establishment of a joint task force — modeled after the Interagency Task Force — to initiate a legislative program that will effectively deal with the need for external capital funding and ongoing structural adjustments to the RTA Act. The first task of this task force will be to determine if bonding the sales tax revenue stream to make a bold start on the initial Cornerstone and New Initiatives Program is a preferred tactic.

4.4.4 Longer-Term Contingency-Related Plans

While progress can be made in the short run, longer-term strategic thrusts will, of necessity, depend on the availabiliity of capital funding and the growth of population and economic activity in the Chicago region. Without funding, of course, the ability to initiate major changes will be limited but not eliminated. The strategic thrusts will remain the same; what will change is emphasis, timing and focus. (It should be noted that economic activity and transit system investment are not independent phenomena: investments stimulate the economy in the short run and help channel and accelerate development in the longer run.)

Prudence and resource availability will dictate the level and location of investment. However, the strategy of investing first in protecting market base and improved cost effectiveness will endure regardless of funding levels and development patterns. Investing first in those markets which will sustain the RTA as a regional system must be an investment priority, as it will maximize the regional public welfare. Maintaining market base (ridership) and increasing market penetration in growth markets will depend on cost effective operations improvements and soundly managed, effective capital projects. With this focus and attention on the highest priority actions for the short-run comes a constituency and credibility.

Ultimately, the question on funding for transit is: Will there be more funds or less transit? That answer is clear if there is a plan, execution of priority elements of a plan, and a track record of proven performance. With increased urban and suburban congestion and stability on the transit operations front, the need for a quality transit system is apparent and the opportunities for additional funding excellent. The only other ingredients for success are positive attitudes, initiatives for progress, and commitment to improved and expanded regional transit — ingredients which are the results of combined, concerted efforts by the Service Boards and the RTA.

5. GOALS, POLICIES
AND
INSTITUTIONAL ARRANGEMENTS

5. GOALS, POLICIES AND INSTITUTIONAL ARRANGEMENTS

Transit in Northeastern Illinois is making a comeback. Ridership is up, costs are being contained, and the new organization is learning to work together. The basic ingredients for success are in place, but threats loom on the horizon. While there is no part of the transit infrastructure that does not serve a useful purpose (albeit some more than others), it is physically deteriorated; and available capital can barely handle half the job that needs to be done. Management is controlling what it can, but no degree of management can reverse the aging process for 90-year old stations and structures or 30-year old rail cars. While it may be convenient to place the blame on past management, that does nothing to change the stark realities of the current situation. The need to replenish goes beyond merely saving the transit network — it strikes at the heart of the regional economy through the millions of riders who depend on the system for work and shopping, and the employers and merchants who rely on it for transporting employees and customers. A further irony is that the parts of the network which serve the largest transit markets (which are also vital to the economy) are the parts that are most at risk.

The RTA mission statement recognizes the challenge and sets the framework for future goals and policies. The adopted statement reads:

> BE IT RESOLVED, that the mission of the Regional Transportation Authority is to assure that the Service Boards deliver the highest quality service for the lowest possible cost, which is coordinated among its various elements with regional plans and economic development requirements, through implementation of tight administrative and fiscal controls, and through expansion and development of new financial resources to meet the changing transit requirements in northeastern Illinois.

While recognizing the need for cost-containment, coordination and quality, the mission also recognizes the reality of the need for . . . "expansion and development of new financial resources . . ."

The strategy that has evolved through the analysis of the current environment and examination of alternative futures can be summed up in a few words:

- Continue prudent fiscal controls on operating expense growth while serving current markets better and probing emerging markets;

- In the short-term, capital investments must be used to do the important things well and not everything to a mediocre level; and

- In the long-term, forge a regional partnership that can find the resources to rejuvenate and expand a transit infrastructure that can spur growth and economic development.

The region has a rich heritage of being a "transit town" and for parts of its history was a role model for the nation's transit systems. The challenge is to return to that status.

5.1 GOALS AND POLICIES

Each Service Board (in addition to the RTA) has a defined mission statement which is supportive of the overall strategic plan. The development of goals, policies and institutional arrangements to support these strategies are natural by-products of organizing to accomplish the strategies.

Suggested goal statements that link the strategic thrusts to the implementation policies include:

GOAL: Continually refine, develop and invest in the most important transit travel markets in order to maximize the regional transportation welfare.

GOAL: Establish a cornerstone transit system that will serve the most number of travelers both now and into the 21st Century.

GOAL: Explore and establish new initiative transit services that will reduce automobile dependency in suburban areas while maximizing transit share in the emerging and future growth markets of the regional system.

GOAL: Invest in new initiatives for technology and productivity in partnership with the private sector to increase productivity, lower cost and improve service.

GOAL: Establish a philosophy and incentives to control cost at or below inflation as an investment in our market — the well-being of the traveler.

GOAL: Seek change in institutional relationships, funding, and management approaches that are supportive of the long-term well-being of regional transit.

GOAL: Establilsh an enduring and stable external financing source that will support the renewal and revitalization of regional transit through the Cornerstone and New Initiatives Program.

The major strategic thrusts contained in this strategic plan and their associated policies are defined in Exhibit 5-1.

5.2 INSTITUTIONAL ARRANGEMENTS

In the near-term, three institutional initiatives are needed to support the Strategic Plan:

- Development of an external funding coalition;
- Adjustments to the funding formula; and
- Creation of an expanded capital planning and management capability.

The need for additional external funding to reverse the decay of an aging regional transit system is one of the highest priority actions for the RTA. Capturing a new funding source will require concerted effort by a coalition of participants; it is not just the responsibility of the RTA. Principal participants in the coalition will include the Service Boards, the City, counties, and related transportation agencies. The private sector representing the economic development interests for the region should be a major participant in the coalition for transit funding.

The second initiative, adjustments to the funding formula, will require early action. Unintended distortions in funding allocations brought on by the legislated funding formulas will create a future problem of inbalance between Service Boards with unplanned and extraordinary sacrifices by some Service Boards required to meet recovery ratio targets. Resolving this issue before it becomes a problem is important to achieving the harmony required for continued regional coordination.

EXHIBIT 5-1
RTA STRATEGIC PLAN AND CAPITAL INVESTMENT PLAN

Policy Framework for the Strategic Plan

Major Strategic Thrusts	Associated Policies
Market Priorities	. Service decisions by the RTA and Service Boards will be made to: 1) protect large traditional markets; 2) seek share in large stable markets; and 3) experiment in growth markets.
Cornerstone Protection	. Capital investment decisions will be made to: 1) protect the cornerstone system; 2) keep the remainder safe; and 3) realign services to optimize the cornerstone investment.
New Initiatives	. Investments in new initiatives will be made to: 1) support the cornerstone system; 2) achieve operating economies in traditional markets; and 3) change any service where share can be increased cost-effectively.
Technology Investments	. Investments in new technology will be made to: 1) gradually phase-in better services for the rider; 2) improve service delivery productivity; and 3) produce operating cost savings by permitting new management and operations techniques.
Operating Cost Containment	. A commitment to operating cost containment will be made to: 1) reduce fare increase pressure; 2) continue ridership recovery to a solid market base; 3) build constituent support; and 4) contribute to capital funding.
Institutional Change	. Adjustments to institutional arangements will be made to: 1) avoid disproportionate financial burdens; 2) support capital program management; and 3) foster regional coordination.
New Funds Sources	. Additional external funding will be sought to: 1) provide needed funds to restore a larger cornerstone and new initiatives program; 2) establish enduring transit system renewal; 3) support cost-effective technology infusion; and 4) promote economic development.

Finally, in anticipation that additional funding will become available to fund the Cornerstone, New Initiatives and New Technology Programs, an increased capability to manage an expanded capital program will be required. While financial resources are a critical missing resource, there is also evidence that, if needed funding were available tomorrow, the management system from funds acquisition to completed projects would be inefficient and require more time than necessary. RTA will need to explore alternative capital program management approaches to increase the effectiveness of existing funding utilization and prepare for the effective management of a capital funding program averaging up to $500 million per year.

5.3 NEXT STEPS

Discussion and agreement on the Strategic Plan concepts, the goals, objectives and supporting policies are clearly the first priority of the RTA Strategic Planning Committee and the full RTA Board. As the strategic elements of the plan are further refined and detailed, a number of activities should be pursued that will: assist the Board in reaching agreement on concepts and directions embodied in the Strategic Plan and provide the Board with action items that will accelerate plan implementation. These activities are grouped into high priority — complete or initiate within the next six months; and medium priority — initiate in the following six months.

5.3.1 High Priority Action Items (Next Six Months)

Activities for near-term focus include:

- Designation of the Cornerstone System
- Investigation of Capital Program Management Alternatives
- Development of Legislative Package;
- Definition and Prioritization of Program of Technical Studies to Support Capital Planning.

The description of the Cornerstone System will need to be carefully considered as it forms the basis of the most resource-consuming portion of the capital budget — the Cornerstone Program. Tasks to be completed in this activity include: specification (and agreement) on the crtieria to be used for inclusion of transit service/lines in the Cornerstone System, analysis of available data to determine unmet and probable future performance of lines and services against these criteria, and agreement on the Cornerstone System.

Capital program management alternatives including organization, functions, processes, roles and responsibilities need to be defined and evaluated to determine how to more effectively manage the capital program under both conditions of scarce resources (current situation) and sufficient resources (potentially achieved in next two years). Tasks in this activity include definition of alternative structures, functions, etc., evaluation of these alternatives in the context of the operating and institutional environment unique to the RTA, definition of "linkages" between the capital management organization and planning organizations and Service Boards, adoption and implementation of a revised capital management program capability.

Development of a legislative package to resolve the critical funding problems of the RTA and related issues needs priority attention. Given the need for as much unaminity as possible on legislation, a joint RTA-Service Board committee, perhaps modeled on the joint inter-agency task force example, should be formed. Tasks in this work, in addition to committee formation, will be the agreement on legislative objectives, development of a communication/issue package for dessimination, definition of critical decision-makers with whom consultation is imperative, performance of a communications/outreach process and, development of draft legislative language.

Development (and initial action on) a technical studies program to support the Strategic Plan initiatives is important to allow for the detailed analyses required to convert strategies into tactics. Elements of a technical studies program would include:

- Cornerstone Privatization Analysis
- Capital Planning Management Study
- Route Rationalization Study - CTA Bus Service Area
- Non-CBD Travel Corridors Identification Study
- Yards/Facilities/Operations Consolidation Study - Metra
- Condition Analysis Survey for Overage Facilities
- Systemwide Railroad Acquisition Impact Analysis
- Capital Project Prioritization and Management System
- Downtown Distributor Feasibility/Implementation Study
- Automatic Fare Collection Feasibility Study
- Service Privatization Study

- Labor Cost and Work Rules Study
- Regional Market Research Study
- Cost Containment Opportunities Study.

Development of the technical studies program will need to focus on the scope of these (or other) technical projects, budget and timing estimates, priority of implementation and responsibility/coordination considerations.

5.3.2 Secondary Action Items (Beyond Six Months)

Obviously, much of the technical studies activities defined above will be ongoing past the six month period. Beyond this continuing activity, the principal objective of the second six month period will be to develop a two-year capital budget (1988-1989) that is consistant with both the Cornerstone System and the three investrment programs described herein (Cornerstone Program, New Initiatives Program and New Technology Program). This will require a determination of the size of each program and its allocation (in dollar and activity terms) among the Service Boards.

A second major endeavor will be the formation of a Public/Private Initiatives Work Group to focus on development opportunities supportive of both the region and the transit system. Initial activities of this group beyond formation will be to develop locations and concepts for suburban transportation centers, the Downtown Distributor System, the Southwest Rapid Transit Line, and major rehabilitation/replacement activities associated with the elevated structures and downtown commuter railroad stations.

A third project will be to investigate mobility-limited service options consistent with funding and regulatory requirements. A major issue to be resolved prior to implementation of rail station rehabilitation projects is the issue of handicapped access to stations.

This is an ambitious program of activity by the RTA and Service Boards. But action toward strategy implementation is the real objective of the strategic planning project. The overall concepts of the RTA and Service Board strategy are in place. While discussion and debate continue on the tactics, roles and responsibilities for implementation, important progress can be made in turning the plan into reality.